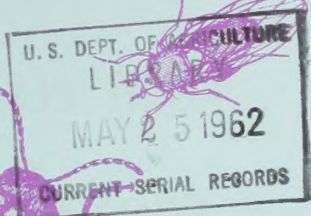


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MAY 18, 1962

The background of the cover is a detailed illustration of various insects. At the top left is a large fly. Below it is a grasshopper. In the center is a large, detailed butterfly with patterned wings. To the right of the butterfly is a large beetle. Above the butterfly is another beetle. Below the butterfly is a grasshopper. To the right of the grasshopper is a small beetle. At the bottom right is a large beetle. The entire cover is filled with various insects, including beetles, flies, ants, grasshoppers, and a large butterfly.

Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Survey and Detection Operations
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

GRASSHOPPER hatch noted in Nebraska and Wyoming. (p. 481). ALFALFA WEEVIL damaging to alfalfa in Delaware, Maryland, Virginia and North Carolina. (pp. 481, 482, 502). PEA APHID very heavy on untreated alfalfa on Eastern Shore of Maryland and on crimson clover in central and southern Alabama, but populations generally light in most areas of the country, with beneficial insects and disease being effective in holding populations in check in numerous areas. (p. 483). SPOTTED ALFALFA APHID increasing on alfalfa in South Dakota. GREENBUG heavy in southeastern South Dakota and found in Blue Earth, Faribault and Martin Counties, Minnesota. Adults of a CICADA (*Okanagana* sp.) extremely heavy in area of Yolo County, California. (p. 484). MEADOW SPITTLEBUG nymphs present on legumes in Wisconsin and several Eastern States. (p. 485). ARMYWORM infestations quite common in southeast and eastern Arkansas, with most of them economic. Continues to build up in southeast Missouri and small larvae observed in central and west central Missouri and southern Illinois. Infestation on oats in Crawford County, Georgia, moderate. EUROPEAN CORN BORER survival surveys in New Jersey and Iowa show winter mortality to be 65.4 and 15.9 percent, respectively. Adult emergence reported in Delaware and Maryland. (p. 486). ARMY CUTWORM continues to hold back growth of alfalfa in several panhandle areas of Nebraska and in Wayne County, Utah. Losses in latter State to alfalfa and small grains exceeded 500,000 dollars this spring. Larvae reported generally light in northwest part of Wyoming. (p. 487). WHEAT CURL MITE found on wheat in Huerfano County, Colorado; entire field showing symptoms of wheat streak mosaic. CODLING MOTH adults reported from several states across the Nation and RED-BANDED LEAF ROLLER larvae present on apple trees in Indiana, New Jersey, Pennsylvania, Maryland and Kansas. (p. 488). PEACH TWIG BORER damage moderate to heavy on peaches at Wenatchee, Washington, and damage common in Weber and Davis Counties, Utah. BLACK CHERRY APHID damaging cherry trees in areas of Pennsylvania, Utah and Oregon. PLUM CURCULIO adults present in Delaware, Pennsylvania, Indiana and Oklahoma. (p. 489).

THRIPS causing some damage to cotton in areas of Georgia, Texas, New Mexico and California. (p. 493). PERIODICAL CICADA adults emerged May 9 in Prince Edward and Appomattox Counties, Virginia. (p. 496). FACE FLY adults present on cattle in Indiana, Iowa and Missouri. HORN FLY light to medium on cattle in Virginia, Illinois, Missouri and Kansas, and relatively heavy in parts of Oklahoma. (p. 498). BLACK FLIES a nuisance in Rhode Island, Maryland and Missouri. AMERICAN DOG TICK heavy and annoying in Rhode Island; adults common in southern and central Maryland; and infestations annoying in Stillwater area of Oklahoma. ROCKY MOUNTAIN WOOD TICK very numerous in areas of Big Horn Basin and in Lincoln and Teton Counties, Wyoming; and LONE STAR TICK medium to heavy in parts of east central and southeast, Oklahoma. TICK populations appear somewhat more numerous in Wisconsin than in 1961. (p. 499).

DETECTION

A MINING SCALE (*Pseudaonidia claviger*) has been collected at St. Petersburg, Florida; first record for the continental United States. (p. 494). ASPARAGUS BEETLE recorded for first time in Nebraska. (p. 492). New county records reported were ALFALFA WEEVIL in Kearny, Rawlins and Decatur Counties, Kansas, and Dickenson County, Virginia (pp. 481-82); and POTATO STALK BORER in Irwin County, Georgia (p. 492).

(continued on page 480)

CORRECTIONS and ADDITIONAL NOTES

See page 502 for corrections and pages 502 and 503 for additional notes (Iowa, North Carolina, North Dakota, South Carolina and Vermont).

SPECIAL REPORTS

Insects Not Known to Occur in the United States (A pasture scarab (Cyclocephala signaticollis Burmeister)). (pp. 505-506).

Reports in this issue are for week ending May 11, unless otherwise indicated.

WEATHER BUREAU 30-DAY OUTLOOK

MID-MAY TO MID-JUNE 1962

The Weather Bureau's 30-day outlook for the period mid-May to mid-June calls for temperatures to continue to average above normal over most areas east of the Continental Divide except for near to below normal over the Northeast and in coastal areas along the Gulf of Mexico. Below normal temperatures are indicated west of the Continental Divide. Precipitation is expected to be subnormal over most of the eastern half of the Nation except for near normal amounts along the Gulf Coast and also in the northern border states. Above normal rainfall is anticipated over much of the western half of the country except for subnormal amounts along the West Coast.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D.C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING MAY 14

A week of warm weather prevailed over the southern half of the Nation and up into the Great Plains where temperatures averaged 12° to 18° above normal. In western Kansas, 100° temperatures were reached for the first time this year on the 11th and 12th, and the mercury at Wink, Texas, soared to 104° on the 10th. Eastern Colorado also experienced 100° heat and set many record highs for so early in the season, and highs in the middle 90's were reported in South Dakota. Another area of high temperature averages was centered over Tennessee. Many record daily highs were set, with heat records at Birmingham, Alabama, having been equaled or exceeded on 6 of 7 days. Only the northeast quadrant and the Far West had significant negative departures. On the 8th, a record low for the date, 25°, was set at Burlington, Vermont, and on the 10th, Harrisburg, Pennsylvania, cooled to 32° for the lowest ever so late in the season in the last 24 years.

Freezing temperatures and significant precipitation were limited mainly to the northern half of the country as frontal systems kept the warm, dry air in the South. The Pacific Northwest was generally cloudy during the entire period, and northern Idaho had showers almost daily. Over much of Montana and North Dakota many stations reported totals exceeding 1.00 inch. Thunderstorms in the Great Plains, many accompanied by hail and strong winds, moved eastward and became most intense in an area from Iowa to Ohio and West Virginia. In Iowa, Ames and Montezuma reported large hailstones, up to baseball size, at the latter site, and Allison recorded wind gusts to 80 m.p.h. During thunderstorm activity near Topeka, Kansas, the temperature was observed to rise from 79° to 90° in the early morning hours of Tuesday. Locally in Illinois, up to 5.00 inches of rain fell in 1 day, and near Scottsville, Virginia, thunderstorm winds blew roofs from several buildings. Winter tried to make a showing in the Great Lakes area as up to 2 inches of snow fell in northern sections of Wisconsin and Minnesota. Some snow was also observed in sections of Pennsylvania, New York and Upper Michigan. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - UTAH - Grasshoppers hatching in many parts of State. Melanoplus spp., Aulocara ellioti and others hatching in great numbers in San Juan County, the Moab area of Grand County, and in smaller numbers in Emery, Carbon, Salt Lake, Utah, Davis and Box Elder Counties. Trimerotropis and a few other range species winged, but rarely numerous. (Knowlton). WYOMING - Hatching in Platte County. Following species found: Amphitornus coloradus, Aulocara ellioti and Chordillacris occipitalis. (Fullerton). NEBRASKA - Heavy hatch observed on range near North Platte, Lincoln County, during week ending May 4. Nymphs of Melanoplus sanguinipes, Aeoloplides turnbulli and Amphitornus coloradus collected. Melanoplus confusus, mostly third and fourth instars, 30 per square yard. (Pruess). KANSAS - Nymphs of Melanoplus spp. and other grasshoppers quite numerous in some areas in western area. Growth ranged from first to third instar. Counts ranged from less than 1 to 3-5 per square yard in a few areas. (Peters). OKLAHOMA - Rangeland counts of several species made in Beckham, Ellis and Major Counties, west central area, and Wood and Woodward Counties, northwest area, indicate that major hatch started. Counts range 1-8 per square yard (first instar). Dominant species Ageneotettix deorum, Aulocara ellioti and Amphitornus coloradus. (Okla. Coop. Sur.). TEXAS - Nymphal populations none to light in Dallas, Tarrant, Denton, Wise, Montague and Cooke Counties. (Texas Coop. Rpt., Stafford). MINNESOTA - Egg development in north-west district as follows: Melanoplus bivittatus coagulated to fully segmented, with 60 percent fully segmented; Camnula pellucida fully segmented; M. packardii coagulated to eye spot; M. sanguinipes, M. differentialis and M. femurrubrum coagulated. Egg predator populations considerably lower than in west central and southwest districts. Cool weather past week retarded egg development. (Minn. Ins. Rpt.). WISCONSIN - Melanoplus confusus first instars observed in Marquette and Columbia Counties on May 4, about 3 days earlier than in 1961. First instars of M. viridipes noted in Grant County and egg pods of M. femurrubrum in coagulated stage in Green County. (Wis. Ins. Sur.).

MORMON CRICKETS - UTAH - Control by baiting underway on 6,000-acre area south of Kanosh, Millard County. (Thornley, Knowlton).

ALFALFA WEEVIL (Hypera postica) - MASSACHUSETTS - First and second instars fairly abundant; few third instars also present. (Wheeler). RHODE ISLAND - Adults common in fields in Kingston; egg masses on 5 of 60 stalks examined. (Mathewson). PENNSYLVANIA - Counts in alfalfa as follows: Adults 1-2 per sweep in southeast (Menusan, May 5); adults 7 and larvae 100 plus per 10 sweeps in Huntingdon County (Udine, May 9); eggs hatching in south central area (Pepper); numerous eggs with few hatched, and some adults present in Snyder County (Gesell); and not yet appearing in Wyoming County (Gesell). NEW JERSEY - Activity increasing, larval populations should reach peak next week in southern counties. (Ins.-Dis.-Weed Newsltr., May 8). DELAWARE - Heavy feeding injury to first-growth alfalfa in many fields throughout State; larvae ranged 10-40 per sweep in these fields. Adults averaged 1-3 per sweep in most fields over State. (Burbutis). MARYLAND - Larvae averaged over 25 per sweep on untreated alfalfa in Dorchester County. Activity and damage continues to increase on untreated alfalfa in all sections. (U. Md., Ent. Dept.). VIRGINIA - Reported for first time in Dickenson County. Most alfalfa fields checked in county heavily infested throughout. (Moore). Local, severe infestation on alfalfa in Dranesville area, Fairfax County. (Hall). Severely infesting untreated alfalfa in Henry, Patrick and Campbell Counties (Tarpley). Caused considerable damage throughout Lee County this year. (Lyle). GEORGIA - Moderate infestation on Ladino clover in Polk County. (Stowe). KANSAS - Larvae and adults collected on alfalfa in Kearny and Hamilton Counties, southwest area, and Cheyenne, Rawlins and Decatur Counties, northwest area. Counts ranged 0-42 larvae per 100 sweeps in southwest area and 0-30 larvae and adults per 100 sweeps in northwest area. No damage observed. Recorded for first time in Kearny, Rawlins and Decatur Counties. (Peters). COLORADO - Larvae becoming more numerous; counts per 100 sweeps 10-30 in Arkansas River Valley, 15-30 in Montrose and Delta Counties and 10-20 in Weld and Larimer Counties. No damage

observed yet. (Bulla, Schweissing, Jenkins). UTAH - Larvae appeared in number of counties; more numerous in southern areas. Adults very abundant in field at Providence, Cache County; 3-11 per 10 sweeps. (Knowlton). Adults 4-27 and larvae 0-23 per 10 sweeps at Richmond, Cache County; population unusually high and injury commenced. (Knowlton, Haws). WYOMING - Adults averaged 1 per sweep in alfalfa in Lincoln and Teton Counties. Larvae averaged 10 per 100 sweeps in Park, Big Horn and Washakie Counties. (Fullerton). IDAHO - Adults averaged 2-3 per sweep and actively mating in Moscow area. Egg laying commenced around May 1. Alfalfa approximately 6-8 inches high. (Manis). NEVADA - First instars present in Reno-Sparks area, Washoe County. (Arnett).

CLOVER LEAF WEEVIL (Hypera punctata) - ILLINOIS - Larvae rapidly maturing and many being killed by disease in southern area. (Ill. Ins. Rpt.). KANSAS - Larval counts in western area ranged 0 to 2-3 per crown, averaging less than 1 per crown. Larvae appear to be about full grown and should pupate very soon. (Peters).

CLOVER HEAD WEEVIL (Hypera meles) - GEORGIA - Larvae infesting crimson clover in Greene County in association with H. nigrirostris; counts 2-3 per head. (Johnson). Also reported on crimson clover in Oconee County. (Curtis).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - PENNSYLVANIA - Few small larvae in clover in south central area; feeding noticed. (Pepper). MARYLAND - Adults active in red clover in Washington County. (U. Md., Ent. Dept.). ILLINOIS - Adults per 100 sweeps in clover and alfalfa ranged 0-10 (averaged 2.2) in east-southeast, 0-20 (averaged 6.7) in southwest and 0-120 (averaged 14.3) in southeast. Larvae on 50-100 (averaged about 87 percent) of red clover stems in southwest and southeast. In 2 red clover fields with 100 percent of stems infested, terminal buds 33 and 48 percent severely damaged or killed, respectively. (Ill. Ins. Rpt.).

CLOVER ROOT CURCULIO (Sitona hispidula) - ILLINOIS - Adults ranged 0-60 and averaged 15 per 100 sweeps in clover and alfalfa in southern half of State. (Ill. Ins. Rpt.).

SWEETCLOVER WEEVIL (Sitona cylindricollis) - ILLINOIS - Adults ranged 0-100 and averaged 7 per 100 sweeps in clover and alfalfa in southern half of State; first-year sweetclover in mixtures with clovers showing up to 50 percent defoliation in some cases. (Ill. Ins. Rpt.). SOUTH DAKOTA - Averaged 16 per 10 sweeps in sweetclover in Brookings County. (Mast). UTAH - Active in San Juan, Grand, Emery and Carbon County areas. (Knowlton).

A WEEVIL (Sitona scissifrons) - MINNESOTA - Averaged 7.4 per 100 sweeps in south central district. (Minn. Ins. Rpt.). SOUTH DAKOTA - Collected from alfalfa in Brookings County; population 120 per 100 sweeps. (Hintz).

VETCH BRUCHID (Bruchus brachialis) - TEXAS - Ranged 1-4 per 10 sweeps in Delta County vetch; vetch not quite ready for controls. (Turney).

CORN FLEA BEETLE (Chaetocnema pulicaria) - DELAWARE - First adults of season present on young corn in western Kent County; feeding injury rather common on most plants. (Burbutis). MARYLAND - Adults light on young field corn in Dorchester and Wicomico Counties. Heavy on young sweet corn locally in Carolina County; also on garden sweet corn in Washington County. (U. Md., Ent. Dept.). MISSOURI - Light on small corn in southwest and west central areas; highest count averaged less than 1 per plant. (Munson, Thomas, Wood). OKLAHOMA - Light and scattered, fewer than 1 per plant, on corn throughout east central and southeast areas. (Okla. Coop. Sur.).

DESERT CORN FLEA BEETLE (Chaetocnema ectypa) - NEVADA - Very light in young grain in Las Vegas and Virgin Valley, Clark County. (Bechtel, Lauderdale).

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - NEBRASKA - Adults averaged 3 per sweep in east and northeast area legumes; as high as 10 per sweep in alfalfa in Saunders County. (Bergman).

A BLISTER BEETLE (*Lytta cyanipennis*) - WASHINGTON - Infesting a lawn near Othello, Adams County. (Waud, Brannon).

WIREWORMS (*Limonius* spp.) - WYOMING - Averaged 1 per square yard in grain fields in Park, Big Horn and Washakie Counties. Very light infestations found in each county. (Fullerton).

WHITE GRUBS (*Phyllophaga* spp.) - MISSOURI - Counts in an area in southeast on some overflow land averaged 3-4 grubs per square foot. (French).

PEA APHID (*Macrosiphum pisi*) - OREGON - Populations generally below normal in Willamette Valley and in Jackson County; counts less than 3 per sweep common. (Capizzi). CALIFORNIA - Heavy on seed alfalfa in Huron, Fresno County. (Cal. Coop. Rpt.). NEVADA - Infestations greatly reduced; averaged 0-6 per sweep in Las Vegas, Moapa Valley and Virgin Valley, Clark County. (Bechtel, Lauderdale, Zoller). IDAHO - Counts 1-10 per sweep in alfalfa in Lewiston Orchards and Lapwai-Culdesac areas, Nez Perce County. (Kambitsch). WYOMING - Averaged 35 per 100 sweeps in alfalfa in Park, Big Horn and Washakie Counties. (Fullerton). UTAH - Present throughout State; occasionally numerous, but serious damage uncommon. (Knowlton). COLORADO - Light on alfalfa; counts 10-40 per 100 sweeps in Otero, Prowers, Bent, Crowley, Weld and Larimer Counties. (Schweissing, Jenkins). NEW MEXICO - Populations unchanged throughout State. Beneficials, such as lady beetles, damsel bugs and flower flies, playing important part in keeping populations low. (N. M. Coop. Rpt.). TEXAS - Light to moderate infestations requiring controls are widespread over Delta and Rockwall Counties. (Turney, Irvin). OKLAHOMA - Light on alfalfa, 20-750 per 10 sweeps, in east central area. Counts in Choctaw County area, southeast, ranged 80-700 per 10 sweeps, with 750-900 per 10 sweeps observed in Tillman County, southwest. Light in Payne County area, north central section. Heavy on red clover in Delaware County area. (Okla. Coop. Sur.). ARKANSAS - Counts on alfalfa in Lonoke County, east central area, relatively low, less than 200 per 100 sweeps. Disease very effective in checking aphid populations. (Ark. Ins. Sur.). MISSOURI - Light in alfalfa and clover throughout State. Counts very low, 3-10 per sweep, and beneficial insect counts high. (Munson, Thomas, Wood). KANSAS - Counts in alfalfa in west central and northwest areas ranged 1,000-2,500 per 100 sweeps. If dry conditions continue, no pea aphid problem will develop. (Peters). NEBRASKA - Less than 1 per sweep in alfalfa at North Platte, Lincoln County. (Pruess). Ranged 10-50 per sweep in alfalfa in east and northeast areas. (Bergman). MINNESOTA - Populations in alfalfa quite low in south central district; counts 0-80 per 100 sweeps; very few nymphs observed. (Minn. Ins. Rpt.). WISCONSIN - Increasing steadily in alfalfa throughout southern and western portions of State. No winged forms noted. Counts average 13 per 10 sweeps in southwestern and west central alfalfa; a 10-fold increase over previous week. Parasites, predators and disease common in most fields. (Wis. Ins. Sur.). ILLINOIS - Counts per sweep in alfalfa and clover were as follows: East, 6-15 (average 11); west-southwest, 10-20 (average 14); east-southeast, 0.5-18 (average 7); southwest, 0.8-115 (average 47); and southeast, 0.3-32 (average 9). Disease beginning to kill some aphids (0-5 percent) and hymenopterous parasites plentiful in some fields. (Ill. Ins. Rpt.). RHODE ISLAND - Appearing in alfalfa in Kingston; many containing hymenopterous parasites. (Mathewson). DELAWARE - Ranged 7-60 per sweep in 15 alfalfa fields in New Castle County; slight injury noticeable in 1 or 2 fields. Many fields in Kent and Sussex Counties averaged 200-300 per sweep, with heavy injury. (Burbutis). MARYLAND - Very heavy on untreated alfalfa on Eastern Shore; averaged over 1,000 per sweep in Dorchester County. A fungus disease beginning to kill aphids in southern sections. Averaged over 100 per sweep and increasing on alfalfa in Washington County. (U. Md., Ent. Dept.). ALABAMA - Extremely heavy populations of this species, along with other aphids, noted on crimson clover throughout central and southern areas. Aphid populations generally heavier than in any previous year. (Buttram).

ENGLISH GRAIN APHID (Macrosiphum granarium) - MARYLAND - Ranged 2-10 per sweep on small grains in Talbot County; predators active. (U. Md., Ent. Dept.). ILLINOIS - Ranged 60-140 and averaged 85 per 100 sweeps in southwest district. (Ill. Ins. Rpt.). WISCONSIN - Winged forms and nymphs found in rye fields; averaged 2 per 100 sweeps in western area. (Wis. Ins. Sur.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - SOUTH DAKOTA - Increased to 74 per 100 sweeps in Gregory County; also found in Charles Mix County. (Walstrom). OKLAHOMA - Light, 150 per 10 sweeps, on alfalfa in Tillman County, southwest area. Counts 0-40 per 10 sweeps in Choctaw County, southeast area. Light, scattered populations, fewer than 50 per 10 sweeps, in fields in east central area (mostly winged forms). (Okla. Coop. Sur.). COLORADO - Not observed in Arkansas River Valley. (Schweissing). UTAH - Present, but rare, at Blanding, San Juan County, and not numerous at Moab, Grand County. Not found over most of State to May 9. (Knowlton). NEW MEXICO - Generally light to moderate infestations in Chaves and Eddy Counties on alfalfa, with an occasional heavy infestation requiring treatment. (N. M. Coop. Rpt.). NEVADA - Populations very low; heaviest counts 2-3 per sweep in southern Clark County. (Bechtel, Lauderdale, Zoller). OREGON - Not collected this season in Jackson County. (Capizzi, May 10).

YELLOW CLOVER APHID (Therioaphis trifolii) - ILLINOIS - Ranged 0-80 (averaged 28) per 100 sweeps in red clover in southwest and 0-70 (averaged 25) in southeast. (Ill. Ins. Rpt.). FLORIDA - Moderately infesting white clover at Ft. Pierce, St. Lucie County, on April 12. (Hayslip).

SWEETCLOVER APHID (Therioaphis riehmi) - ILLINOIS - Populations 0 and 200 per 100 sweeps, respectively, in 2 southeast district sweetclover fields. (Ill. Ins. Rpt.).

GREENBUG (Toxoptera graminum) - MINNESOTA - Found in Blue Earth, Faribault and Martin Counties. Small numbers collected in ditch banks and field margins on blue grass and volunteer oats and wheat. None found in small grain fields. Small grains just emerging. Mostly winged forms; few nymphs present. Close observation of small grain fields for next few weeks recommended. (Minn. Ins. Rpt.). SOUTH DAKOTA - Heavy populations found in southeastern area. Barley plots at Centerville Experimental Farm, Clay County, averaged 5 per plant with 90 percent of plants infested. Small numbers found on winter wheat in Brookings area, Brookings County. (Orlob, Peterson). NEBRASKA - Ranged 3-20 and averaged 10 per sweep in wheat in eastern area, and averaged 2 per sweep on oats in northeast. (Bergman). KANSAS - Counts in wheat in west central and northwest areas averaged less than 5 per foot of row. Highest counts noted were less than 25 per foot of row. Wheat all jointed; some heading out. Unless counts get considerably higher, no greenbug problem anticipated. (Peters).

CORN LEAF APHID (Rhopalosiphum maidis) - TEXAS - Heavy, damaging population found on 30 acres of grain sorghum in Johnson County. (Turney). OKLAHOMA - Only occasional winged individuals, fewer than 1 per plant, observed on young corn plants throughout east central area. Heavy on volunteer sorghum and barley in Wagoner County, but none found in corn in nearby areas. Light, 5 per plant, on corn in Pushmataha and Choctaw Counties, southeast area. (Okla. Coop. Sur.).

AN APHID (Hyalopteroides dactylidis) - WASHINGTON - Causing "burned tips" on orchardgrass at Friday Harbor, San Juan County. (Baker).

APHIDS - GEORGIA - Heavy infestations present on field peas in Tattnall, Wayne, Ware and Cook Counties. (Smith, Johnson).

A CICADA (Okanagana sp.) - CALIFORNIA - Extremely heavy adult populations now emerging in Yolo Bypass area (spreading grounds for the Sacramento River floodwaters), Bryte, Yolo County. This area has been flooded during early spring; nymphs apparently not affected. As many as 12 emergence holes per 6-inch square noted. Observations in past 7 years have not indicated a population of adults present. This is primarily native grasses and brush cover. (C. Maddock, Water Resources).

TARNISHED PLANT BUG (Lygus lineolaris) - PENNSYLVANIA - General and quite abundant in legumes. (Pepper). ILLINOIS - Adults ranged 0-110 and averaged 24 per 100 sweeps in clover and alfalfa in southern half of State; nymphs ranged 0-20 and averaged 1.7 per 100 sweeps in southwest. (Ill. Ins. Rpt.). MINNESOTA - Averaged 4 per 100 sweeps in south central district. (Minn. Ins. Rpt.). NEBRASKA - Adults averaged 8 per sweep in alfalfa in east and northeast areas. (Bergman). OKLAHOMA - Populations 20-30 per 10 sweeps common throughout southeast and east central areas; both nymphs and adults present in east central area. (Okla. Coop. Sur.).

LYGUS BUGS (Lygus spp.) - NEW MEXICO - Becoming more plentiful throughout southern counties. Averaged 1-3 per sweep in alfalfa in Otero County, 20-45 per 100 sweeps in Chaves and Eddy Counties and 30-40 per 100 sweeps in Dona Ana County alfalfa and barley fields. (N. M. Coop. Rpt.). COLORADO - Counts 10-30 per 100 sweeps in alfalfa in Otero, Montrose, Mesa and Delta Counties. (Schweissing, Bulla). WYOMING - Adults per 100 sweeps in alfalfa averaged 20 in Park, Big Horn and Washakie Counties and 10 in Lincoln and Teton Counties. Nymphs averaged 15 per 100 sweeps in Big Horn and Washakie Counties; none found in Park, Lincoln and Teton Counties. (Fullerton). NEVADA - Averaged 5-8 per sweep in most alfalfa fields in southern Clark County. (Bechtel, Lauderdale, Zoller). UTAH - Eighty percent L. elisus, numerous on mustards and in some alfalfa fields at Blanding, San Juan County; Mapleton-Orem area, Utah County; Moab, Grand County; and Green River area, Emery County. (Knowlton).

RAPID PLANT BUG (Adelphocoris rapidus) - DELAWARE - First nymphs of season present on alfalfa in New Castle and Kent Counties. (Burbutis). ILLINOIS - Nymphs ranged 0-140 and averaged 14 per 100 sweeps in clover and alfalfa in southern half of State. (Ill. Ins. Rpt.).

ALFALFA PLANT BUG (Adelphocoris lineolatus) - ILLINOIS - Nymphs ranged 0-120 and averaged 15 per 100 sweeps in clover and alfalfa in southern half of State. (Ill. Ins. Rpt.).

A MIRID (Labops hesperus) - SOUTH DAKOTA - Localized, very heavy populations, averaging 6 to one square inch, in soil at base of wheat plants in Stanley County. Also reported in Custer County. (Hintz, Mast).

MEADOW SPITTLEBUG (Philaenus spumarius) - MASSACHUSETTS - First spittle masses being found in crowns of alfalfa. (Wheeler). NEW JERSEY - Newly hatched nymphs noted on alfalfa and clover. (Ins.-Dis.-Weed Newsltr., May 8). PENNSYLVANIA - Relatively low in legumes in southeast, May 5 (Menusan), and very abundant in untreated fields in south central area (Pepper). MARYLAND - Nymphal populations increasing on red clover in western counties. (U. Md., Ent. Dept.). DELAWARE - Nymphs present in alfalfa throughout State. (Burbutis). WISCONSIN - Hatched in alfalfa in southern and western part of State; counts less than 1 per 10 stems. Populations appear lower than in 1961. (Wis. Ins. Sur.).

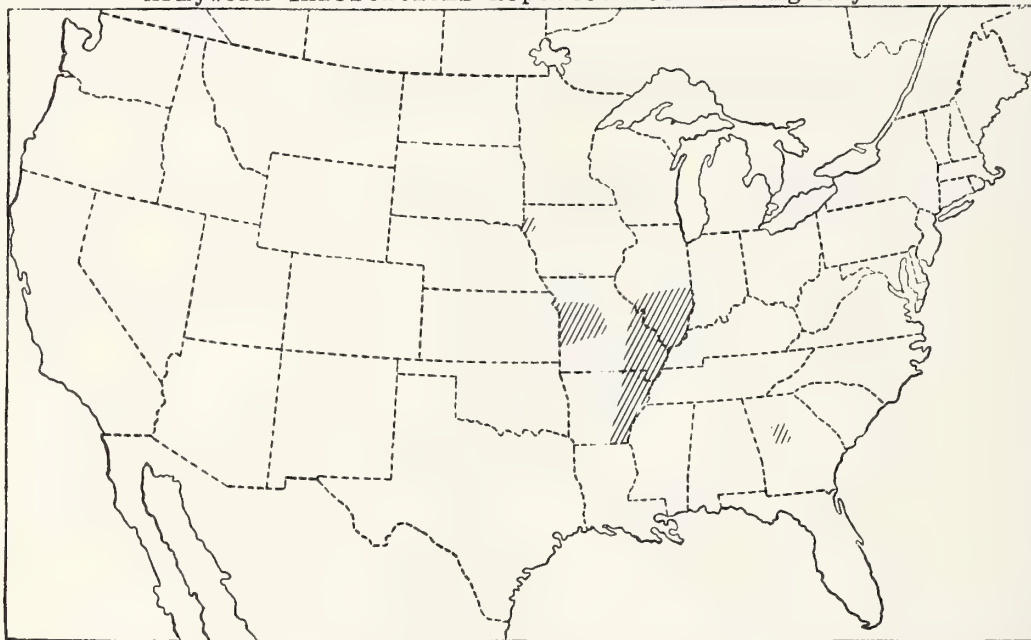
SIX-SPOTTED LEAFHOPPER (Macrostelus fascifrons) - MINNESOTA - Averaged 2.4 per 100 sweeps on alfalfa in south central district. (Minn. Ins. Rpt.). WISCONSIN - Females swept from grain and alfalfa in Crawford, La Crosse, Trempealeau, Kenosha and Portage Counties to date; counts generally low (averaged 3.5 per 200 sweeps). (Wis. Ins. Sur.). SOUTH DAKOTA - Present in wheat in Stanley County; counts 20-140 per 100 sweeps. (Mast, Hintz).

POTATO LEAFHOPPER (Empoasca fabae) - ILLINOIS - Adults per 100 sweeps in clover and alfalfa ranged 0-140 and averaged 60 in west-southwest, 0-50 and averaged 22.2 in east-southeast, 0-70 and averaged 37.5 in southwest and 0-60 and averaged 17.1 in southeast. (Ill. Ins. Rpt.).

A LEAFHOPPER (Agallia lingula) - FLORIDA - Collected on grass at Hialeah, Dade County, on July 15, 1961, by C. E. Stegmaier, Jr. These are first specimens for Florida State Collection of Arthropods. (Fla. Coop. Sur.)

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - NEW JERSEY - Spring survival survey completed; 97 fields in 12 counties inspected. Mortality of larvae during winter of 1961-62 highest of any year that survey has been conducted. Average percent mortality of overwintering larvae by years as follows: 1954 - 20.2; 1955 - 43.7; 1956 - 42.1; 1957 - 56.7; 1958 - 27.1; 1959 - 32.4; 1960 - 55.3; 1961 - 63.0; 1962 - 65.4. As in most past years, bird feeding was major factor in killing of larvae during winter months. (Ins.-Dis.-Weed Newsltr., May 8). DELAWARE - First adults of season emerged May 9 and 10 from cages in Newark. (Bray). MARYLAND - Emergence of moths underway on Eastern Shore; 30 percent complete at Mardella, Wicomico County, on May 8. (U. Md., Ent. Dept.). ILLINOIS - Pupation 4 percent at Urbana. (Ill. Ins. Rpt.). MINNESOTA - No development of overwintering larvae noted in south central district. (Minn. Ins. Rpt.). IOWA - Annual spring survival survey conducted at random in 45 oat fields in 5 sections of State, plus 32 oat fields in Boone County. Percent survival 82 in southwest, 82 in northwest, 76 in central, 88 in northeast and 89 in southeast. Total of 106 live borers found from grand total of 126. Percent survival for State 84.1. Average number of live borers per square yard 0.47 compared with 0.42 in 1961. Number of borers per acre of oat ground 2,275 compared with 2,033 in 1961. First pupae found in Boone County May 12. (Iowa Ins. Inf.).

Armyworm Infestations Reported Week Ending May 11



ARMYWORM (*Pseudaletia unipuncta*) - ARKANSAS - Infestations quite common in small grain fields in southeast and eastern areas; 85-90 percent of fields infested with varying numbers of larvae. Larval counts average 1-15 per square foot in infested fields. Second to fourth instars predominant. Infestations in majority of fields economic. About one-third of fields treated to May 12. (Ark. Ins. Sur.) MISSOURI - Continue to build up in barley and wheat in southeast area. Some leaf feeding observed. Larvae ranged from newly hatched to third instar. Counts per square foot ranged 3-23 in barley and 0-11 in wheat. (French). Small larvae observed in barley and fescue in central and west central areas. (Munson, Thomas, Wood). IOWA - Half-grown larva found in Plymouth County May 8. (Iowa Ins. Inf.). ILLINOIS - Small larvae observed in grass throughout southern area; ranged 0-50 and averaged 12.5 per 100 sweeps in wheat in southwest. (Ill. Ins. Rpt.). MARYLAND - Surveys in small grains in Talbot, Worcester and Wicomico Counties on May 8 negative. (U. Md., Ent. Dept.). GEORGIA - Moderate infestation on oats in Crawford County. (Dick).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - DELAWARE - First adults of season noted at lights in New Castle County May 7. (Burbutis).

ALFALFA CATERPILLAR (Colias eurytheme) - WYOMING - Adults numerous in alfalfa in Park, Big Horn and Washakie Counties. (Fullerton).

GREEN CLOVERWORM (Plathypena scabra) - ILLINOIS - First larvae of season noted in southern area May 9. (Ill. Ins. Rpt.). OKLAHOMA - Counts light to medium, 1-10 per 10 sweeps, on alfalfa in Choctaw County, southeast area; 1-2 per 10 sweeps in Sequoyah County, east central area. (Okla. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Moderate numbers in vetch in Rockwall County; infestation increasing. (Irvin). OKLAHOMA - Light (1 per 10 sweeps), scattered populations on alfalfa in Choctaw County, southeast area. Only occasional larva noted in Muskogee County, east central area. (Okla. Coop. Sur.).

CLOVER HEAD CATERPILLAR (Grapholitha interstinctana) - ILLINOIS - Ranged 0-20 and averaged 4 per 100 sweeps in clover and alfalfa in southern half of State. (Ill. Ins. Rpt.).

A CLOVER BUD CATERPILLAR (Grapholitha conversana) - IDAHO - Adults noted in Moscow area. (Futten, Portman).

CORN EARWORM (Heliothis zea) - ARKANSAS - Third and fourth instars on crimson clover in Lafayette, Hempstead and Little River Counties, southwest area. (Ark. Ins. Sur.). OKLAHOMA - Medium, 30 per 10 sweeps, in alfalfafield in Choctaw County, southeast area. None found in east central area. (Okla. Coop. Sur.).

ARMY CUTWORM (Chorizagrotis auxiliaris) - UTAH - Holding back nearly all alfalfa growth in Wayne County; larvae still actively feeding in this area. (Knowlton, Hall). Caused damage exceeding 500,000 dollars to alfalfa and small grains and range this spring. (Knowlton). WYOMING - Larvae light in alfalfa in Lincoln, Teton, Big Horn and Washakie Counties; averaged less than 1 per square foot. One infestation found in Shell Canyon damaged 100 acres of alfalfa; counts 6 per square foot. (Fullerton). NEBRASKA - Continues to hold back growth of alfalfa in several panhandle areas; some small grain treated. (Pruess). CALIFORNIA - Light populations in alfalfa in Yreka area, Siskiyou County. (Cal. Coop. Rpt.).

VARIEGATED CUTWORM (Peridroma saucia) - CALIFORNIA - Larvae heavy in alfalfa in Escondido, San Diego County. Several local areas now experiencing infestations in various locations, particularly in southern area of State. In some locations, a predaceous ground beetle (Calosoma sp.) active and reducing infestations. (Cal. Coop. Rpt.). MISSOURI - Continues light in alfalfa in southeast; counts 0 to 3-4 per square foot. (French). Small larvae noted in alfalfa in central area. (Munson, Thomas, Wood).

CUTWORMS - SOUTH DAKOTA - Agrotis orthogonia reported causing damage in weedy, seedling alfalfa in Lyman County. (Mast). MISSOURI - Larvae of Nephelodes emmedonia damaging spots in bluegrass lawns in northwest. (Munson, Thomas, Wood). TEXAS - Light infestations of unspecified species in Rockwall County showing signs of building up. (Irvin). FLORIDA - Feltia subterranea infesting St. Augustine grass at Hialeah, Dade County, on April 25. (Stegmaier).

A CECIDOMYIID (undetermined) - TEXAS - Approximately 5 percent of wheat stalks in local area of Wilbarger County infested; larvae being found between leaf sheath and stem above last node. No apparent damage. Wheat in soft-dough stage. (Lehmborg).

A CRANE FLY (Tipula sp.) - CALIFORNIA - Medium populations in alfalfa in Yreka area, Siskiyou County. (Cal. Coop. Rpt.).

A SAWFLY (Dolerus sp.) - ILLINOIS - Larvae per 100 sweeps ranged 0-90 in grass and 0-10 in wheat in southern half of State. (Ill. Ins. Rpt.).

A THRIPS (Frankliniella occidentalis) - CALIFORNIA - Heavy on seed alfalfa in Huron, Fresno County. (Cal. Coop. Rpt.).

THRIPS (undetermined) - ILLINOIS - Ranged 0-60 and averaged 40 per 100 sweeps in wheat in southwest. (Ill. Ins. Rpt.). GEORGIA - Light on peanuts in Berrien, Cook, Tift, Irwin and Ben Hill Counties. (Johnson).

BROWN WHEAT MITE (Petrobia latens) - UTAH - Light in San Juan, Tooele and Salt Lake Counties. (Knowlton). COLORADO - Trace numbers in northwest Weld County on wheat. Spotty in Otero County; counts 10-20 per linear foot of drill row. (Jenkins, Schweissing). NEBRASKA - Spotted infestations occurring in Cheyenne County wheat. (Liljegren). SOUTH DAKOTA - This species and Penthaleus major ranged 10-45 per leaf on winter wheat in Stanley County, May 7; however, rain on following morning and survey on same morning showed greatly reduced populations. (Hintz, Mast).

WHEAT CURL MITE (Aceria tulipae) - COLORADO - Found on wheat in Huerfano County. Entire field showing symptoms of wheat streak mosaic. Symptoms noted in a few fields in Weld County. (Blase, Hantsbarger, Jenkins).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - COLORADO - Found in Otero County on barley; 14-20 per foot of drill row. (Schweissing).

SPIDER MITES - MARYLAND - Undetermined species heavily infesting red clover in Washington County May 3. (U. Md., Ent. Dept.).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - DELAWARE - Adult emergence began in cages in Kent County May 8. (MacCreary). MARYLAND - Pupation now occurring at Hancock, Washington County. (U. Md., Ent. Dept.). INDIANA - Three adults emerged from rearing cage on apple tree at Vincennes, Knox County, May 7. This is first emergence of season. (Hamilton). KANSAS - Adults started emergence in cages May 6 in Doniphan County. (Eshbaugh). COLORADO - First taken in Mesa County May 4; heavy flights May 5-6. (Bulla). UTAH - First adults taken in bait traps at Bountiful, Davis County, May 8, and in blacklight traps at Logan, Cache County, May 9. (Knowlton, Davis). OREGON - First adult emergence observed May 5 in Medford area, Jackson County; first eggs tagged May 9. (Berry).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - NEW JERSEY - Egg deposition heavy in some apple orchards. (Ins.-Dis.-Weed Newsltr.). PENNSYLVANIA - Egg laying started on apples in Erie County, May 3, and continued on cherries in northeast area until May 6 when cold weather occurred. Eggs present but not heavy in Lancaster County; all hatched in south central area. (Cox, Pepper). MARYLAND - Eggs and larvae found in abandoned apple orchard at Hancock, Washington County. (U. Md., Ent. Dept.). INDIANA - Approximately 70 percent of first-brood eggs now hatched in Terre Haute area, Vigo County; 1-5 day-old larvae present in area. (Hamilton, May 8). KANSAS - Egg masses hatching by May 5 in Doniphan County. (Eshbaugh).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - INDIANA - Bait trap captures of adults continued high May 4-7 in Vincennes area, Knox County. (Hamilton). KANSAS - Adults emerged in cages May 6 in Doniphan County. (Eshbaugh).

FRUIT-TREE LEAF ROLLER (Archips argyrospilus) - MARYLAND - Appears more abundant in orchards in Hancock area, Washington County, than in previous few years. (U. Md., Ent. Dept.).

PEACH TWIG BORER (Anarsia lineatella) - WASHINGTON - Moderate to heavy damage to peaches at Wenatchee, Chelan County; especially heavy on untreated trees. (Anthon). UTAH - Damage common in Weber and Davis Counties. (Knowlton, Burningham). COLORADO - Taken in light trap in Mesa County May 6. (Bulla).

SPRING CANKERWORM (Paleacrita vernata) - MARYLAND - Larvae feeding on foliage in apple orchard west of Hancock, Washington County. (U. Md., Ent. Dept.).

GREEN FRUITWORM (Lithophane antennata) - VERMONT - Activity observed May 8. (MacCollom).

PLUM CURCULIO (Conotrachelus nenuphar) - OKLAHOMA - Caused considerable damage to native plums in areas of Wagoner County; no damage observed in peach orchard in same area. (Okla. Coop. Sur.). INDIANA - In Vincennes area, Knox County, 15 adults jarred from one apple tree in untreated orchard May 7; few adults jarred from well treated peach orchards on same date. (Hamilton). PENNSYLVANIA - First injury noted May 10 in Cumberland County on plum. (Pepper). DELAWARE - First feeding scars on apples noted May 8 in Sussex County. (MacCreary).

A LEAF BEETLE (Syneta albida) - OREGON - Caused light damage to cherry fruit and foliage in orchards in Yamhill and Polk Counties during early May. (Stephenson).

ROSY APPLE APHID (Anuraphis rosea) - NEW JERSEY - Found in 2 apple orchards in Gloucester County. (Ins.-Dis.-Weed Newsltr.). PENNSYLVANIA - No alates appeared on apple in southeastern orchards. (Pepper). Some entering leaves in Huntingdon County. (Udine). MARYLAND - Light numbers of clusters observed in apple orchards in Hancock area, Washington County. (U. Md., Ent. Dept.). COLORADO - Light to moderate in Montrose County. (Bulla).

APPLE APHID (Aphis pomi) - OREGON - Severe infestation near Sheridan, Yamhill County, in early May. (Stephenson). CONNECTICUT - Scarce, even on check trees. (Savos).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - PENNSYLVANIA - Winged forms migrated to southeastern area apple orchards. (Pepper).

BLACK CHERRY APHID (Myzus cerasi) - OREGON - Abundant in untreated cherry orchards and dooryard plantings in Medford area, Jackson County. (Capizzi). Observed in Polk and Marion Counties in cherry orchards. (Stephenson). UTAH - Curling leaves at Blanding, San Juan County; Ferrin-Huntington area, Emery County; Provo area, Utah County; and north through Box Elder County. (Knowlton). PENNSYLVANIA - Infestations light but causing some leafcurl to sweet cherries in Erie County and northeastern area. (Adams).

GREEN PEACH APHID (Myzus persicae) - COLORADO - Colonies moderate to heavy on peach in Mesa County; 20-30 colonies per tree. (Bulla).

MEALY PLUM APHID (Hyalopterus pruni) - NEVADA - Heavy on apricot in Las Vegas, Clark County. (Bechtel, Lauderdale, Zoller).

APHIDS - OKLAHOMA - Heavy populations on native plum in Le Flore County; also reported on fruit trees in Choctaw County. (Okla. Coop. Sur.).

TARNISHED PLANT BUG (Lygus lineolaris) - INDIANA - Peak of activity passed and is now light in Vincennes area, Knox County. (Hamilton, May 8).

STINK BUGS - INDIANA - Continue active on peaches in Vincennes area, Knox County. (Hamilton, May 8).

PEAR PSYLLA (Psylla pyricola) - WASHINGTON - First spring generation now in fourth and fifth instars; pre-bloom treatment only moderately effective, retreatment required in many orchards in Chelan County. (Burts).

A GALL MIDGE (Dasyneura pyri) - OREGON - Abundant in pear plantings May 7 in Polk and Yamhill Counties. (Stephenson).

EUROPEAN RED MITE (Panonychus ulmi) - INDIANA - Hatched forms averaged 1.5 per leaf in one orchard sampled May 7 at Vincennes, Knox County. (Hamilton). PENNSYLVANIA - Hatching completed in south central area on apple. (Pepper). Most hatched in Huntingdon County, May 9, and 75 percent hatched May 10 in Erie County. (Udine, Adams). CONNECTICUT - Hatching completed in Litchfield area, Litchfield County. (Savos). VERMONT - Hatching begun. (MacCollom).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - PENNSYLVANIA - Beginning to appear on apple in Cumberland County. (Pepper). COLORADO - Populations heavy in peach and apple orchards in Mesa County. (Bulla). OREGON - Present in small numbers in Jackson County in pear orchards, particularly in tree tops close to main trunk. (Capizzi).

PECAN NUT CASEBEARER (Acrobasis caryae) - TEXAS - Infestations in Wharton County erratic due in part to very light and scattered nut crop. (Whitley). ALABAMA - Caused very light damage locally; moderate to heavy infestations in Baldwin and Mobile Counties. (Buttram).

PECAN LEAF CASEBEARER (Acrobasis juglandis) - ALABAMA - Very light damage locally; moderate to heavy infestations in Baldwin and Mobile Counties. (Buttram).

BLACK PECAN APHID (Melanocallis caryaefoliae) - ALABAMA - Increasing in Mobile County. (Buttram).

BLACK-MARGINED APHID (Monellia costalis) - NEW MEXICO - Populations building up on pecan foliage in Mesilla Valley; honeydew very evident on foliage. (N. M. Coop. Rpt.).

APHIDS (Myzocallis spp.) - NEW MEXICO - M. caryaefoliae populations building up on pecan in Mesilla Valley; honeydew very evident on foliage. (N. M. Coop. Rpt.). OREGON - Populations of M. coryli spotty in filbert orchards in Willamette Valley; unfavorable weather apparently holding development. (Stephenson).

SPITTLEBUGS - GEORGIA - Moderate infestations of unspecified species on pecan trees in Ware County. (Boland, Johnson).

SAWFLIES - TEXAS - Larvae of unspecified species caused light, widespread ragging of pecan trees in Ellis County. (Turney).

VARIEGATED CUTWORM (Peridroma saucia) - CALIFORNIA - Heavy populations on orange tree seedlings; also damaged trunks of trees under tree protectors in Rancho Santa Fe and noted on native grasses in El Cajon, San Diego County. (Cal. Coop. Rpt.).

TRUCK CROP INSECTS

CUTWORMS - MISSOURI - Agrotis ipsilon, Feltia subgothica and Peridroma saucia damaged a variety of plants in gardens throughout State. (Munson, Thomas, Wood). WISCONSIN - Adults of A. ipsilon have been collected in blacklight traps at Madison and Middleton since April 26; several undetermined species present in gardens. (Wis. Ins. Sur.).

POTATO FLEA BEETLE (Epitrix cucumeris) - DELAWARE - Common in most areas on beans and tomatoes in Sussex County. (Burbutis). ALABAMA - Appears number one pest of sweetpotatoes presently; heavy infestation in Baldwin County. (Buttram).

FLEA BEETLES - PENNSYLVANIA - Unspecified species very abundant on various crops in State. (Pepper). MARYLAND - Epitrix spp. abundant on untreated potatoes in

Dorchester County and infesting newly set tomato plants in Montgomery and Somerset Counties. Phyllotreta spp. abundant on radishes, turnip greens and newly set cabbage plants in Wicomico and Dorchester Counties. (U. Md., Ent. Dept.).
DELAWARE - First adults of season of Phyllotreta cruciferae common on young cabbage in western Kent County. (Burbutis).

WIREWORMS - NEBRASKA - Unidentified species abundant in many gardens and causing damage to strawberries in North Platte, Lincoln County. (Pruess).

GREEN PEACH APHID (Myzus persicae) - NORTH CAROLINA - Infesting 10-20 percent of plants in a Carteret County cabbagefield. (Jones, Williams). COLORADO - Colonies present on Lycium sp. in Weld County; ranged 10-20 per 100 net sweeps at Fort Lupton, Weld County. (Jenkins). CALIFORNIA - Heavy adult populations occurring on melon vines in Modesto, Stanislaus County. (Cal. Coop. Rpt.).

POTATO TUBERWORM (Gnorimoschema operculella) - CALIFORNIA - Light, larval populations occurring on volunteer potato plants in Edison, Kern County. (Cal. Coop. Rpt.).

POTATO APHID (Macrosiphum euphorbiae) - DELAWARE - Alates and nymphs present on potatoes in New Castle County; first of season. (Burbutis).

POTATO PSYLLID (Paratrioza cockerelli) - COLORADO - Adults number 10-30 per 100 net sweeps on Lycium sp. in Weld County; no eggs or nymphs found. Adults number 30-40 per 100 net sweeps, eggs 7-9 per leaf and nymphs 3-4 per leaf in Otero County. (Schweissing, Jenkins).

GRASSHOPPERS - NEW MEXICO - Damaged seedling tomatoes near Deming, Luna County; bait controls being used. (N. M. Coop. Rpt.).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - MARYLAND - First adults and eggs of season observed May 8 in large numbers on commercial potato acreage in Dorchester County. (U. Md., Ent. Dept.).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - OKLAHOMA - Local infestations on melons in Jefferson County. (Okla. Coop. Sur.).

GARDEN SPRINGTAIL (Bourletiella hortensis) - MARYLAND - Abundant on 5 acres of newly emerged cucumber plants at Vienna, Dorchester County. (U. Md., Ent. Dept.).

CABBAGE LOOPER (Trichoplusia ni) - NORTH CAROLINA - Light in field of cabbage in Carteret County. (Jones, Williams). GEORGIA - Heavy on cabbage in Ware County. (Johnson). OKLAHOMA - Only occasional larva noted on cabbage checked in Bixby area, Tulsa County. (Okla. Coop. Sur.).

IMPORTED CABBAGEWORM (Pieris rapae) - DELAWARE - First small larvae found on young cabbage in Kent County. (Burbutis). MARYLAND - Eggs abundant on newly set cabbage in Somerset County. (U. Md., Ent. Dept.).

DIAMONDBACK MOTH (Plutella maculipennis) - UTAH - Extremely abundant on native mustards in Mapleton-Spanish Fork area, Utah County. (Knowlton).

CABBAGE CURCULIO (Ceutorhynchus rapae) - PENNSYLVANIA - Larvae heavily infested stems of mustard at Boiling Springs, Cumberland County. (Negley, May 4).

TURNIP APHID (Rhopalosiphum pseudobrassicae) - OKLAHOMA - Ranged 5-15 per leaf (averaged 6-8) on turnip in Bixby area, Tulsa County; none observed on mustards in Le Flore County. (Okla. Coop. Sur.).

CABBAGE MAGGOT (Hylemya brassicae) - MASSACHUSETTS - First eggs of season reported May 6 (Wheeler); present in Waltham, Concord and Andover. (Whitcomb). VERMONT - Egg laying can be expected with occurrence of warm weather. (MacCollom).

BEAN LEAF BEETLE (Cerotoma trifurcata) - ALABAMA - Continues as number one pest on beans and peas in Mobile County. (Seibels). MISSOURI - Observed feeding on garden beans, watermelon and cantaloup in southeastern area. (French). MARYLAND - Adults common and injurious to young beans in Somerset and Wicomico Counties. (U. Md., Ent. Dept.). DELAWARE - Adults and feeding injury fairly common in large field of beans in Sussex County. (Burbutis).

MEXICAN BEAN BEETLE (Epilachna varivestis) - ALABAMA - Caused heavy damage to beans in Sumter County. (Cranberry).

PEA APHID (Macrosiphum pisi) - DELAWARE - Increased on peas in Sussex County; counts averaged 9-10 per sweep. (Burbutis). MARYLAND - Populations averaged 41 per sweep on large commercial pea acreage near Trappe, Talbot County. (U. Md., Ent. Dept.).

BEET LEAFHOPPER (Circulifer tenellus) - WYOMING - Survey in suspected breeding areas of Shell Canyon and Washakie County negative. (Fullerton).

THRIPS - NEW JERSEY - Adults ranged 4-5 per onion plant in one field. (Ins.-Dis.-Weed Newsltr.).

ASPARAGUS BEETLE (Crioceris asparagi) - RHODE ISLAND - Has not appeared in State this season. (Mathewson, King, Hannah, Cartier). NEBRASKA - Present on asparagus in Lincoln, Lancaster County, May 9; this is a new record for the State. (Jones, Staples).

TULIP BULB APHID (Anuraphis tulipae) - CALIFORNIA - Medium populations occurred on carrots for seed in Bakersfield, Kern County. (Cal. Coop. Rpt.).

OMNIVOROUS LEAF TIER (Cnephasia longana) - OREGON - Infestations light on strawberries in central Willamette Valley in early May. (Stephenson).

MITES - NEW JERSEY - Serious problem in some areas on strawberries. (Ins.-Dis.-Weed Newsltr.).

TOBACCO INSECTS

TOBACCO WIREWORM (Conoderus vespertinus) - NORTH CAROLINA - Infested 50 percent of tobacco plants in 3 fields in Wilson County; infestation ranged 5-30 percent in 3 other fields. Less than 10 percent of wireworms collected were C. lividus. A 20-90 percent infestation of C. vespertinus found in 2 tobacco fields in Martin County; latter field will be entirely replanted. Infestations of 80-90 percent by C. vespertinus also noted in 3 fields in Edgecombe County. Many individual plants being replaced in these counties because of injury, and entire portions of fields being replanted. Det. by R. L. Rabb. (Guthrie, Mount).

SOUTHERN POTATO WIREWORM (Conoderus falli) - NORTH CAROLINA - Reported damaging tobacco plants in Pender and Pamlico Counties. However, number of determined specimens quite small in both counties. Det. by R. L. Rabb. (Honeycutt, Stovall).

TOBACCO BUDWORM (Heliothis virescens) - GEORGIA - Moderate to heavy on tobacco in Bullock, Tattnall, Wayne, Ware, Atkinson, Tift, Cook, Berrien and Irwin Counties. (Johnson).

POTATO STALK BORER (Trichobaris trinotata) - GEORGIA - Light on tobacco in Irwin County; this is a new county record. (Girardeau).

GREEN PEACH APHID (Myzus persicae) - GEORGIA - Light on tobacco in Bullock, Tattnall, Wayne, Ware, Atkinson, Tift, Cook, Berrien and Irwin Counties. (Johnson).

A STINK BUG - GEORGIA - An undetermined species caused light damage to tobacco in Tattnall County; field had been treated and no specimens were found. (Johnson).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Weather has not been favorable for activity in McLennan and Falls Counties. Weevils found at rate of 10 per acre in 33 fields inspected; ranged 0-250 per acre. This compares with 3 per acre in 43 fields during corresponding week of 1961. Two weevils were collected on flight screens. (Cowan, Davis). Occasional weevil reported from Nueces and Fort Bend Counties and lower Rio Grande Valley. No controls yet required in any area. (Texas Coop. Rpt.).

PINK BOLLWORM (Pectinophora gossypiella) - NEW MEXICO - First adults emerged April 30 in experimental cages located at New Mexico State University, State College, Dona Ana County; 2 additional moths recovered May 4. (N. M. Coop. Rpt.).

BOLLWORMS (Heliothis spp., et al.) - GEORGIA - An occasional egg found in one field of cotton in Irwin County; these are first eggs found this season. (Johnson).

A CLIMBING CUTWORM - TEXAS - An unspecified species causing severe damage to some scattered fields in eastern Willacy County. (Deer).

COTTON APHID (Aphis gossypii) - TEXAS - Infestations were as follows: None in 12 fields, light in 20 fields and medium in one field, in McLennan and Falls Counties. (Cowan, Davis). Generally light over wide areas of State; occasional field with moderate infestation present, especially in coastal bend area where controls have been common. (Texas Coop. Rpt.).

AN APHID (Aphis sp.) - CALIFORNIA - Medium on cotton in Huron, Fresno County. (Cal. Coop. Rpt.).

COTTON LEAFHOPPER (Psallus seriatus) - TEXAS - Few adults found in 4 of 33 fields inspected in McLennan and Falls Counties. (Cowan, Davis). Generally very light, with less than one percent infestation in most areas; fields with 12-21 percent infestation found in Fort Bend County, however. (Texas Coop. Rpt.).

THRIPS - GEORGIA - Unspecified species light to moderate on cotton in Warren, Jefferson, Burke, Jenkins, Screven, Bulloch, Tattnall, Wayne, Tift, Cook, Berrien, Irwin, Pulaski and Bleckley Counties. (Johnson). TEXAS - Infestations of unspecified species increased in Falls and McLennan Counties; some fields showing damage and general injurious populations expected over area. Inspection of fields just up to a stand showed adults continuing to migrate into cotton. Infestations were as follows: Heavy in 11, medium in 9 and light in 13 fields. (Cowan, Davis). Infestations of several species generally light over most cotton areas; moderate infestations reported from Fort Bend and Wharton Counties. (Texas Coop. Rpt.). NEW MEXICO - Light to relatively heavy damage on cotton foliage evident in several fields checked in Luna County. (N. M. Coop. Rpt.). NEVADA - Frankliniella sp. infestations declining rapidly on seedling cotton, but previous damage heavy in some fields in Moapa Valley, Clark County. (Bechtel, Zoller). CALIFORNIA - Frankliniella occidentalis medium on cotton in Huron, Fresno County. (Cal. Coop. Rpt.).

SPIDER MITES - TEXAS - Generally very light in State; few scattered, heavy infestations reported in Cameron County. (Texas Coop. Rpt.). CALIFORNIA - Petrobia latens generally medium in cotton in Murray area, King County; Tetranychus atlanticus building up to medium populations generally in cotton in Kern, Kings and Fresno Counties. Early mite populations probably resulted from unusually favorable conditions in 1961. (T. Leigh, C. Jackson).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

A MINING SCALE (Pseudaonidia claviger) - FLORIDA - Collected at St. Petersburg, Pinellas County, on various dates from April 9 to May 7, 1962, on the following hosts: Camellia spp., C. japonica, C. sasanqua, Gardenia sp., Jasminum sambac, Ligustrum sp., Osmanthus sp., Pyracantha sp., Quercus sp. (seedling), Rhododendron sp., and Viburnum sp. Collectors included C. E. Bingaman, G. W. Dekle, P. E. Frierson, L. B. Hill, E. W. Miller and G. M. Whitton, Jr. This is the first record of this species for the continental United States. (Fla. Coop. Sur.).

PINE TUSSOCK MOTH (Dasychira plagiata) - MINNESOTA - Some 3,600 acres of jack pine near Willow River, Pine County, scheduled for aerial treatment in late May or early June for control of infestation. Pest completely defoliated about 1,000 acres of jack pine in area during 1961. Much of area was salvage cut during past fall and winter. Present control project aimed at protecting jack pine surrounding defoliated area. Observation in area indicated some feeding by overwintering third instars; feeding light due to low temperatures. (Minn. Ins. Rpt.).

WHITE-PINE WEEVIL (Pissodes strobi) - RHODE ISLAND - Adults common on white pine in Washington County. (Mathewson, Moorhouse).

A BARK BEETLE (Pseudohylesinus sp., probably nebulosus) - IDAHO - Infesting bark of felled Douglas-fir May 1 at Bogus Basin Ski Area, north of Boise, Ada County; this is first seasonal activity. Flight continuing and parents still mining through outer bark; have not begun constructing egg galleries. (Manis).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - RHODE ISLAND - Eggs noted in south Kingstown, Washington County, May 1. (Mathewson).

SPRUCE SPIDER MITE (Oligonychus ununguis) - DELAWARE - Heavy on several spruce trees in one area of New Castle County. (Burbutis).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - RHODE ISLAND - Small tents evident; extremely scarce in Washington County; more numerous, but not heavy, in northern areas. Areas of heavier infestation may appear later. (Mathewson, May 5). Late tents show infestation in Washington County to be heavier than previously indicated. (Mathewson). PENNSYLVANIA - None noted in wooded areas in Franklin County, May 4. (Balsbaugh). VIRGINIA - Tents conspicuous on wild cherry and other hosts in Floyd, Patrick, Henry and Albemarle Counties. (Tarpley). ILLINOIS - Although widespread in southern half of State, not as abundant as during past 2 or 3 years. (Ill. Ins. Rpt.).

FOREST TENT CATERPILLAR (Malacosoma disstria) - TEXAS - Continues a widespread problem on live and post oaks; large acreages defoliated in Coryell, Mills, Hamilton, Lampasas, Williamson and Bosque Counties. (Garner). COLORADO - Appearing on native shrubs in foothills of western Larimer County and on plum, crabapple and mountain ash in Denver. (Chambers, Marshall Nursery, Lawson). UTAH - Infestation generally light in northern portion of State. (Knowlton).

TENT CATERPILLARS (Malacosoma spp.) - WYOMING - Malacosoma sp. invading trees in Worland, Powell and Basin areas of Washakie, Park and Big Horn Counties, respectively. (Fullerton). KANSAS - Webbing evident in wild plums in Riley, Marshall and Washington Counties. (Parker).

HICKORY TUSSOCK MOTH (Halisidota caryae) - WISCONSIN - First adult of season caught in blacklight trap at Madison, Dane County, May 5. (Wis. Ins. Sur.).

GYPSY MOTH (Porthetria dispar) - RHODE ISLAND - First hatch noted May 2 in Richmond Township, Washington County. (Cartier).

ELM LEAF BEETLE (Galerucella xanthomelaena) - OKLAHOMA - First egg hatch and larval feeding of season has begun on elms in Stillwater (north central) and

Wagoner (east central) areas. (Okla. Coop. Sur.). NEVADA - Eggs present in Reno-Sparks area, Washoe County. (Arnett).

LEAF BEETLES - IDAHO - Adults of Disonycha latifrons and Altica bimarginata abundant on willows bordering American Falls Reservoir, Power County. (Schow, Manis). PENNSYLVANIA - Chrysomela interrupta very numerous and laying eggs on willow in Huntingdon County, May 5. (Pepper).

A CERAMBYCID (Calligrapha multipunctata) - IDAHO - Adults abundant on willows bordering American Falls Reservoir, Power County. (Schow).

A SCOLYTID (Anisandrus dispar) - WASHINGTON - Heavy on elm trees near Lyle, Klickitat County. Det. by M. H. Hatch. (Smith, Brannon).

AN ASH PLANT BUG (Neoborus illitus) - CALIFORNIA - Heavy on Modesto ash trees in Modesto, Stanislaus County. (Cal. Coop. Rpt.).

WOOLLY APPLE APHID (Eriosoma lanigerum) - OKLAHOMA - Causing leaves of elms to rosette in Stillwater area, Payne County. (Okla. Coop. Sur.).

AN OAK KERMES SCALE (Kermes pubescens) - OKLAHOMA - Infesting oaks in Tulsa, Wagoner, Tahlequah, McAlester and Durant areas. (Okla. Coop. Sur.).

GALL INSECTS - MISSOURI - Galls of undetermined cynipids present on pin oaks throughout State. (Munson, Thomas, Wood). TEXAS - Moderate, local population of cecidomyiid galls, with larvae present, attacking poplar in Dallas County. (Milikien). Many species of galls present on oaks and poplars over State; homeowners very concerned about problem. (Texas Coop. Rpt.).

BIRCH LEAF MINER (Fenusa pusilla) - RHODE ISLAND - Adults heavy on birch in Washington, Kent and Providence Counties. (Mathewson, Cartier, Kerr). CONNECTICUT - Active in Niantic area, New London County. (Savos). DELAWARE - Adults present and laying eggs in New Castle County. (Bray).

ELM SAWFLY (Cimbex americana) - TEXAS - Moderate, widespread defoliation of elms causing concern in De Witt and Lavaca Counties. (Whitley, Heideman).

OAK SAWFLIES - DELAWARE - Unspecified species heavy on white oak in central Kent County. (Bray). OKLAHOMA - An undetermined species causing considerable damage to foliage of pin oaks in Stillwater area, Payne County. (Okla. Coop. Sur.).

AN ANT (Liometopum occidentale occidentale) - CALIFORNIA - Heavy populations general in oak trees and other vegetation in Ojai, Ventura County. (Cal. Coop. Rpt.).

MAPLE BLADDER-GALL MITE (Vasates quadripedes) - MISSOURI - Galls evident on maples throughout central, north central and northwest areas. (Munson, Thomas, Wood). MARYLAND - Galls abundant on several red maples at Laurel, Prince Georges County. (U. Md., Ent. Dept.).

LEAF CRUMPLER (Acrobasis indiginella) - TEXAS - Heavy, local infestation of 75-100 larvae and pupae reported on single pyracantha in Washington County. (Texas Coop. Rpt., McClung).

A LOOPER (Coryphista meadi) - CALIFORNIA - Medium to heavy on Oregongrape (Mahonia aquifolium) in several northern locations of State. (Cal. Coop. Rpt.).

A CUTWORM (Feltia ducens) - NEBRASKA - Abundant and damaging chrysnathemums at North Platte Experiment Station. (Pruess).

A DOGWOOD BORER (Agrilus cephalicus) - DELAWARE - Adult emerged from infested dogwood limb from central Kent County, May 10. (Bray).

A SCARAB (Hoplia sp., probably callipyge) - CALIFORNIA - Unusually heavy on rose blooms in Sacramento area, Sacramento County; heavy and damaging rose blooms in local foothill areas in northern part of State. (Cal. Coop. Rpt.).

A WEEVIL (Ceutorhynchus punctiger) - PENNSYLVANIA - Feeding on seeds of dandelion at Boiling Springs, Huntingdon County, May 4. (Negley).

BOSTRICHIDS AND LYCTIDS - NEVADA - Heavy infestations of Dendrobiella aspera, Xylobiops sextuberculatus, Xyloblaptus prosopidis, Lyctus sp. and Trogoxylon aequale present on fruitless mulberry trees in a nursery and yard in Las Vegas, Clark County. Trees in good condition not being attacked; those trees which failed to bud and leaf normally, and have growth of basal leaves only, being attacked and entered at bud area. (Bechtel, Nichols, Zoller).

SPIREA APHID (Aphis spiraeicola) - FLORIDA - Moderate to severe on Polyscias balfouriana and Pyracantha atalantoides (Apr. 12), severe on Bursera simaruba (Apr. 25), and moderate on Macadamia ternifolia (Apr. 27) at Ft. Lauderdale, and severe on Cryptostegia grandifolia (Apr. 25). and light on Ixora parviflora (Apr. 12) at Dania, both in Broward County; infested Pyrus sp. at Mascotte, Lake County (Apr. 23); severe on Citrus sinensis at Ft. Pierce, St. Lucie County (Apr. 12); present on Prunus sp. at Titusville, Brevard County (Apr. 17); and infested Chenopodium botrys at Tampa, Hillsborough County (Apr. 16). (Fla. Coop. Sur.). DELAWARE - Heavy on spirea in New Castle and Sussex Counties. (Burbutis). UTAH - Populations low as of May 9. (Knowlton).

BLACK CITRUS APHID (Toxoptera aurantii) - FLORIDA - In Broward County, moderate on Ixora parviflora and Clusia rosea at Dania (Apr. 12-13), and severe on Coccolobia uvifera (Apr. 18) and light on Macadamia ternifolia at Ft. Lauderdale (Apr. 27). Infested Camellia sp. at Lakeland, Polk County (Apr. 18) and at St. Petersburg, Pinellas County (Apr. 19). (Fla. Coop. Sur.).

GREEN PEACH APHID (Myzus persicae) - CALIFORNIA - Heavy on stock plantings in Mompoc, Santa Barbara County. (Cal. Coop. Rpt.).

MELON APHID (Aphis gossypii) - FLORIDA - Moderate on Solanum seaforthianum at De Leon Springs, Volusia County (Apr. 13); light on Hibiscus rosa-sinensis at Homestead, Dade County (May 2); and severe on Tabebuia pentaphylla at Ft. Lauderdale, Broward County (Apr. 27). (Fla. Coop. Sur.).

APHIDS - TEXAS - Widespread attacks of unspecified species in Henderson County caused considerable leaf curling on various shade trees. (Hatter). OKLAHOMA - Several species continue active on variety of ornamentals throughout State. Heavy populations reported on blackjack oak in Oklahoma City area; also noted killing twigs of pine trees in same area. Populations down and high degree of parasitism observed in Stillwater area, Payne County. (Okla. Coop. Sur.). KANSAS - Winged forms and many immatures present on maple leaves in Doniphan County; also clustered on tips of many shoots of spirea in same area. (Eshbaugh). NEBRASKA - Undetermined species abundant and curling leaves of snowball, chokecherry and other ornamentals in North Platte, Lincoln County. (Pruess). UTAH - Infesting rose bushes at Provo, Payson and Salt Lake City. (Knowlton).

Aphids in Florida - Aphis coreopsidis moderate on Baccharis halimifolia at Dania, Broward County (Apr. 20); Capitophoris eleagni severe on Cirsium sp. at Indian-town, Martin County (Apr. 20); Cinara louisianensis light on Thuja orientalis at Ft. Lauderdale, Broward County (Apr. 18); Myzus hemerocallis severe on 2,000 Hemerocallis sp. at Pensacola, Escambia County (Apr. 18). (Fla. Coop. Sur.).

PERIODICAL CICADA (Magicicada septendecim) - VIRGINIA - Adults present May 9 in Prince Edward and Appomattox Counties (Peery, Smith, Tarpley); also present in many other sections of State (Tarpley).

LACE BUGS - MARYLAND - Adults of Stephanitis spp. and Corythucha spp. appeared May 9 on azalea and sycamore, respectively, at University Park, Prince Georges

County. First nymphs of season noted on azalea at Adelphi, Prince Georges County, May 5. (U. Md., Ent. Dept.).

OYSTERSHELL SCALE (Lepidosaphes ulmi) - INDIANA - Brown race infesting butternut and walnut trees in Indianapolis, Marion County. (Schuder). COLORADO - Eggs on lilac appear to be developing and crawlers should be present in 1-2 weeks in Fort Collins area, Larimer County. (Jenkins). IDAHO - Still in egg stage on lilacs in Moscow area, Latah County, as of May 6. (Portman).

EUONYMUS SCALE (Unaspis euonymi) - MARYLAND - Crawlers appeared May 3 on euonymus at Hagerstown, Washington County. (U. Md., Ent. Dept.).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - MARYLAND - Crawlers active May 11 on lilacs at Chevy Chase, Montgomery County. (U. Md., Ent. Dept.).

COCCIDS - MARYLAND - Pulvinaria sp. heavy on pyracantha at Lewisdale, Prince Georges County. (U. Md., Ent. Dept.). VIRGINIA - Lecaniodiaspis sp. medium on native azalea at locality in Nelson County and on Japanese holly in nursery in Pittsylvania County. (Miller, Jr.). MISSOURI - First Aspidiotus liquidambaris crawlers of season observed in east central area. (Lenhardt).

Coccids in Florida - Aspidiotus cyanophylli moderate on Billbergia amoena var. minor at Tampa, Hillborough County (Apr. 23). A. lataniae infested Euonymus sp. at Ft. Meyers, Lee County (May 1) and 500 Rhododendron sp. at Pembroke, Polk County (May 1); was moderate on 3,000 Philodendron oxycardium at Plymouth, Orange County (May 3) and on Diospyros sp. at Groveland, Lake County (Apr. 18). Asterolecanium bambusae was moderate on bamboo at Pembroke (May 1). Aonidiella taxus infested 500 Podocarpus plants at St. Petersburg, Pinellas County (May 3). Ceroplastes ceriferus was moderate on Diospyros sp. at Groveland (Apr. 19), and was light on Podocarpus macrophylla maki at Homestead, Dade County (May 4). Chrysomphalus aonidium light on 200 Howea sp. at Pembroke (Apr. 30) and on Camellia japonica at Lake Wales, Polk County (May 1); severe on Epidendron mariae-ames (Apr. 19) and moderate on Severinia buxifolia (Apr. 20) at Ft. Lauderdale, Broward County. Eucalymnatus tessellatus infested Mimusops roxburghiana and severely infested Ilex cornuta at Ft. Lauderdale (Apr. 20). Florinia theae was severe on I. cornuta at Ft. Lauderdale (Apr. 20) and light on Camellia sp. at Tampa (Apr. 26). Gymnaspis aecheae infested Billbergia sp. at Zephyrhills, Pasco County (Apr. 20) and was moderate on Billbergia amoena var. minor at Tampa (Apr. 23). Parlatoria proteus infested Fortunella sp. at New Smyrna Beach, Volusia County (Apr. 26), and was moderate on Citrus reticulata at Geneva, Seminole County (Apr. 30). Phenacaspis cockerelli was light on Strelitzia reginae (Apr. 19) and on Magnolia sp. (Apr. 26) at Tampa; was moderate on S. reginae at Bradenton, Manatee County (Apr. 23) and light on Arecastrum romanzoffianum at Zephyrhills (Apr. 30). Pinnaspis aspidistrae was moderate on Cycas revoluta at Windermere, Orange County (Apr. 26), and severe on Aspidistra elatior at Pembroke (May 1). Pseudococcus citri ranged moderate to severe on Saintpaulia spp. at Plymouth (May 3) and was light on 7,000 plants of Citrus sp. at Dade City, Pasco County (May 4). Saissetia hemisphaerica was moderate on Severinia buxifolia at Ft. Lauderdale (Apr. 20). Toumeyella liriodendri severely infested hundreds of Michelia fuscata at Ocala, Marion County (Apr. 19). Unaspis citri was moderate on Citrus sinensis at Longwood (Apr. 26) and at Casselberry (May 2), Seminole County; light on Citrus aurantifolia X fortunella at Orlando, Orange County (Apr. 20), and C. sinensis at O'Steen, Volusia County (May 3). (Fla. Coop. Sur.).

CITRUS WHITEFLY (Dialeurodes citri) - GEORGIA - Heavy infestations, probably this species, present on a number of ornamentals in Athens, Clarke County. (Johnson).

A PSYLLID (Psylla uncatoides) - CALIFORNIA - Heavy on Acacia latifolia in Vista, San Diego County. (Cal. Coop. Rpt.).

THRIPS - RHODE ISLAND - Probably Gnophothrips piniphilus, present on black pine in Kingston, Washington County, with history of infestation of this species. (Cartier). TEXAS - Local populations of unspecified species causing light damage to gladiolus in Henderson County. (Hatter).

HOLLY LEAF MINERS (Phytomyza spp.) - RHODE ISLAND - Well-advanced pupae of Phytomyza sp. present in mines examined in south Kingstown, Washington County, May 5. (Mathewson). INDIANA - P. ilicicola infesting American holly at Terre Haute, Vigo County. (Schuder). OREGON - Pupation of P. ilicis underway; first few adults emerged at Astoria, Clatsop County, week of May 6. (Goeden).

BOXWOOD LEAF MINER (Monarthropalpus buxi) - MARYLAND - Pupation about complete May 9 on American boxwood at Laurel, Prince Georges County. (U. Md., Ent. Dept.).

AN ARBORVITAE LEAF MINER - MASSACHUSETTS - An unspecified species more abundant than in recent years. (Wheeler, May 10).

ERIOPHYID MITES - CALIFORNIA - Medium population of Eriophyes emarginatae causing leaf galls on Prunus demissa in Castle Crag State Park, Shasta County. Calacaras carinatus and Acaphylla steinwedeni heavy on camellia leaves on nursery plants in Vista, San Diego County. (Cal. Coop. Rpt.).

PILLBUGS - TEXAS - Heavy populations attacking young ornamentals in all areas of Refugio County. (Bredthauer).

INSECTS AFFECTING MAN AND ANIMALS

FACE FLY (Musca autumnalis) - INDIANA - Ranged 0-5 per head on herd of Angus cattle; some also found on nearby buildings. (Laemmlen). MISSOURI - Activity began 7-10 days earlier this season than in 1961; first adults observed on cattle in central area April 22 and first larvae in area collected May 2. Adults reproducing in field in central and northern areas. (Wingo). IOWA - Collected from faces of calves April 26. Counts 1-8 per animal on cattle on pasture May 2-8 in southeast and northwest areas; heaviest numbers on young calves. Cattle in Benton, Linn and Tama Counties bunching and showing obvious annoyance on May 4. (Iowa Ins. Inf.).

HOUSE FLY (Musca domestica) - NEVADA - Population increasing in southern Clark County. (Bechtel, Zoller). OKLAHOMA - Becoming annoying in Stillwater area, Payne County. (Okla. Coop. Sur.).

HORN FLY (Haematobia irritans) - OKLAHOMA - Ranged 450-600 per head on cows in Pushmataha County (southeast); 150-400 per head in east central area; and up to 750 per head on cows and 1,000 per head on bulls in Stillwater area, Payne County (north central). (Okla. Coop. Sur.). KANSAS - Beginning to appear on cattle in western part of State; ranged 10-100 per animal. (Peters). MISSOURI - Light to moderate in northwest area. (Munson, Thomas, Wood). IOWA - Ranged 0-5 per animal on pasture in northwest. (Iowa Ins. Inf.). ILLINOIS - Varied 10-200 (averaged 55) per animal on cows in southeast district. (Ill. Ins. Rpt.). VIRGINIA - Light to medium on several herds checked in Bedford, Campbell, Appomatox, Amherst and Nelson Counties. (Tarpely).

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - Limited adult activity continues in scattered areas over State. (Okla. Coop. Sur.).

TABANIDS - NEVADA - Adult population of Silvius pollinosus heavy in Virgin Valley, Clark County. (Bechtel). OKLAHOMA - Light activity of Tabanus spp. and Chrysops spp. observed on cattle and horses in southeast area; none observed throughout east central areas. (Okla. Coop. Sur.). MISSOURI - Tabanus lasiophthalmus heavy and feeding on beef cattle in west central area. (Munson, Thomas, Wood). MARYLAND - Deer flies annoying humans in tidewater sections. (U. Md., Ent. Dept.).

A SCREW-WORM - KANSAS - Larvae of an undetermined species infesting dehorning wounds in Riley County. (Pitts).

MOSQUITOES - MARYLAND - An outbreak of Aedes sollicitans occurred on lower Eastern Shore. Adults of Culex spp. and Culiseta spp. taken in resting boxes at Rhodestdale, Dorchester County, May 7; Aedes canadensis, a rare species, taken in flight at Laurel, Prince Georges County, on same date. (U. Md., Ent. Dept.). WISCONSIN - Adults of unspecified species more noticeable in northern portion of State although no real problems yet reported. Few complaints received from southern area. (Wis. Ins. Sur.). MINNESOTA - During period April 29 to May 5, some 1,463 larval collections were made; 38 percent of collections contained Aedes excrucians, 37 percent A. vexans, 31 percent A. fitchii, 24 percent A. cinereus, 16 percent A. stimulans and A. flavescens, and 10 percent A. canadensis. Aedes pupae present in 9 percent of collections. Cool weather during period has delayed pupation and emergence; adults still rare May 10. Culiseta inornata, which overwinters as an adult, now found in about 4 percent of larval collections. (Minn. Ins. Rpt.). IOWA - Overwintered Culex spp. and Culiseta spp. observed and reported biting humans since mid-April. Aedes vexans not developing as yet. (Iowa Ins. Inf.). UTAH - Unspecified species troublesome near Colorado River in Moab area, Grand County; adults also troublesome in Helper-Wellington area, Carbon County, and few present at Green River, Emery County. (Knowlton). NEVADA - Adult population of Aedes vexans moderate in Virgin Valley, Clark County. (Bechtel).

BLACK FLIES - RHODE ISLAND - Unspecified species have been active for about 2 weeks in all sections. (Mathewson King, Kerr, May 5). Normal number of complaints for season being received from all rural areas of State. (Mathewson). MARYLAND - Simulium jenningsi adults becoming active and causing annoyance to humans in Montgomery County. (U. Md., Ent. Dept.). MISSOURI - Simulium sp. feeding around ears of horses in west central area. (Wingo).

CHIRONOMID MIDGES - RHODE ISLAND - Unspecified species causing nuisance in vicinity of mill trench in West Warwick, Kent County. (Mathewson).

CATTLE LICE - UTAH - Troublesome to cattle in Spanish Fork Canyon, Utah County. Contorls applied to more than 50 percent of beef cattle in Wayne County, (Knowlton, Hall).

AMERICAN DOG TICK (Dermacentor variabilis) - RHODE ISLAND - Heavy in coastal sections of South Kingstown, Washington County, May 3. (Mathewson). Present statewide; more complaints received from Providence County than in previous years. (Mathewson, King, Peabody, Cartier, Hannah). MARYLAND - Adults common in wooded areas and fields in southern and central sections. (U. Md., Ent. Dept.). VIRGINIA - Found on children and pets in Blacksburg area, Montgomery County. (Turner). OKLAHOMA - Infestations continue annoying to picnickers in Stillwater area, Payne County. (Okla. Coop. Sur.).

ROCKY MOUNTAIN WOOD TICK (Dermacentor andersoni) - WYOMING - Very numerous in areas of Big Horn Basin and in Lincoln and Teton Counties. (Fullerton).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Medium to heavy populations observed in portions of east central area and in southeast area. (Okla. Coop. Sur.).

BLACK-LEGGED TICK (Ixodes scapularis) - RHODE ISLAND - Adults collected from cat at South Kingstown, Washington County. (Mathewson, May 1).

TICKS - WISCONSIN - Reports indicate these pests to be a problem in Buffalo, Crawford, Portage and Shawano Counties, and particularly annoying in Eau Claire, Oconto and Marinette Counties. Populations appear somewhat more numerous than in 1961. (Wis. Ins. Sur.).

HOUSEHOLD AND STRUCTURAL INSECTS

ORIENTAL COCKROACH (Blatta orientalis) - PENNSYLVANIA - Annoying in home at Lewisburg, Union County, and Pittsburgh, Allegheny County. (Gesell, Udine).

MARYLAND - Infested basement of home at Hyattsville, Prince Georges County. (U. Md., Ent. Dept.). NEBRASKA - Abundant in many homes and business establishments in North Platte, Lincoln County. (Pruess). SOUTH DAKOTA - Abundant in homes in Hot Springs area, Fall River County. (Mast). CALIFORNIA - Heavy population invaded home at Oroville, Butte County. (Cal. Coop. Rpt.).

DERMESTID BEETLES - UTAH - Unspecified species infested many foods in large kitchen at Tremonton, Box Elder County. (Knowlton). Trogoderma parabile extremely abundant in home at Smithfield, Cache County. Several cases of carpet beetles reported from this county recently. (Thornley, Knowlton). TEXAS - Trogoderma sternale infested a fabric shop in Tarrant County and caused concern. (Payne).

BLACK CARPET BEETLE (Attagenus piceus) - MARYLAND - Larvae injured fabrics in several homes in Baltimore. (U. Md., Ent. Dept.). IOWA - Reported from all areas of State. (Iowa Ins. Inf.).

SOUTHERN LYCTUS BEETLE (Lyctus planicollis) - CALIFORNIA - Medium infestation occurred in home in Fresno, Fresno County. (Cal. Coop. Rpt.).

A FALSE POWDER-POST BEETLE (Polycaon stouti) - NEVADA - Attacked furniture in home in Las Vegas, Clark County. (Morgan Pest Cont. Co.).

A SPIDER BEETLE (Mezium americanum) - PENNSYLVANIA - Abundant in home in Delaware County May 4. (Menusan).

GROUND BEETLES - TEXAS - Becoming pestiferous in and around homes in Tarrant County; adults swarm to lights at night. (Graves).

EASTERN SUBTERRANEAN TERMITE (Reticulitermes flavipes) - MASSACHUSETTS - Requests for determination and information increasing each year. (Wheeler).

WESTERN SUBTERRANEAN TERMITE (Reticulitermes hesperus) - WASHINGTON - Infested building near Ritzville, Adams County. (Hintze, Brannon).

A ROTTENWOOD TERMITE (Zootermopsis nevadensis) - CALIFORNIA - Medium to heavy population occurred in basement of home in Oroville, Butte County. (Cal. Coop. Rpt.).

TERMITES - NEBRASKA - Undetermined species noted in home at Paxton, Keith County. (Pruess). UTAH - Unspecified species emerged for flight in home at Tremonton, Box Elder County. (Knowlton).

CARPENTER ANTS - RHODE ISLAND - Complaints concerning Camponotus sp. average in number. Alates noted. (Mathewson, Cartier, May 5). PENNSYLVANIA - C. nearcticus became annoying in home at Yardly, Bucks County; det. G. B. Slesman. (Slesman, May 5). VIRGINIA - C. pennsylvanicus alates noted at Leesburg, Loudoun County. (Rowell, Brown, May 1). WASHINGTON - Camponotus sp. infested home at Hood Canal, Mason County. (O'Conner, Brannon). IOWA - Unspecified species unusually active in central area during spring. (Iowa Ins. Inf.).

CARPENTER BEE (Xylocopa virginica) - GEORGIA - Caused considerable boring damage in house in Athens, Clarke County, and to barn in Lexington, Oglethorpe County. (Carter, Jordan).

CLOVER MITE (Bryobia praetiosa) - VERMONT - A problem in some homes in Burlington area, Chittenden County. (MacCollom). PENNSYLVANIA - Infested home for third consecutive year at Evans City, Butler County, May 4. Numerous reports from western part of State and reported at Clearfield, Dubois County. (Simons, Udine, Adams). VIRGINIA - Numerous in home kitchen at Culpeper, Culpeper County. (Rowell, Heltzel, May 1). UTAH - Unusually troublesome in homes in Salt Lake, Emery, Utah, Davis and Weber Counties. (Knowlton).

BENEFICIAL INSECTS

LADY BEETLES - IDAHO - Numerous species averaged 1-3 per sweep in alfalfa sampled in Lewston Orchards and Lapwai-Culdesac area, Nez Perce County. (Kambitsch). UTAH - Lady beetles not yet abundant in alfalfa in Cache County. (Knowlton). WYOMING - Hippodamia sp. ranged 5-15 per 100 sweeps in alfalfa. (Fullerton). OKLAHOMA - Several species ranged light to heavy on most crops throughout State. (Okla. Coop. Sur.). ILLINOIS - Adults of several species varied 0-140 (average 82) per 100 sweeps in clover and alfalfa in southern half of State; larvae ranged 0-49 (average 5) per 100 sweeps. (Ill. Ins. Rpt.). VIRGINIA - Numerous adults of Coleomegilla maculata fuscilabris noted at Christiansburg, Montgomery County, hibernating at base of tree. (Tarpley, Hepler). PENNSYLVANIA - Chilocorus stigma numerous in Scotch pine planting May 2. (Gesell).

DAMSEL BUGS (Nabis spp.) - ILLINOIS - Adults averaged 17 per 100 sweeps in clover and alfalfa in southern half of State. (Ill. Ins. Rpt.). WYOMING - Averaged 15 per 100 sweeps in alfalfa in Park, Big Horn and Washakie Counties. (Fullerton).

GREEN LACEWINGS (Chrysopa spp.) - OKLAHOMA - Light to medium populations of both larvae and adults throughout State. (Okla. Coop. Sur.).

A PRAYING MANTID (Tenodera sp.) - VIRGINIA - Numerous nymphs and egg cases noted at Christiansburg, Montgomery County; nymphs noted at Purcellville, Loudoun County, on May 2. (Tarpley, Hepler, Brown).

FLOWER FLIES - ILLINOIS - Larvae observed first time this season in southwest district. (Ill. Ins. Rpt.) OKLAHOMA - Light to heavy larval populations present on alfalfa throughout southeast and east central areas; up to 30 per 10 sweeps. (Okla. Coop. Sur.).

HONEY BEE (Apis mellifera) - RHODE ISLAND - Overwintered well and show strong activity. (Mathewson, May 5).

WILD BEES - RHODE ISLAND - Andrena sp. active and Nomada spp. noted. (Mathewson, May 1).

Beneficial insects in Texas - PARASITIC BRACONIDS, LADY BEETLES, and LACEWINGS very numerous in northeastern part of State where corn leaf aphid (Rhopalosiphum maidis) and pea aphid (Macrosiphum pisi) are problems. (Turney). Helping to hold cotton aphid (Aphis gossypii) in check in Nueces County. (Nolan).

Beneficial insects in Arkansas - Spring clovers, small grains and roadside weeds harboring increasing populations of various species of LADY BEETLES, GREEN LACEWINGS (Chrysopa spp.), a BIG-EYED BUG (Geocoris punctipes) and a FLOWER BUG (Orius insidiosus). (Ark. Ins. Sur.).

MISCELLANEOUS INSECTS

ALFALFA LOOPER (Autographa californica) - UTAH - Of the numerous noctuids collected in blacklight traps, 20-95 percent this species. Also numerous at conventional light traps and extremely numerous at lilac blossoms in evenings. (Davis, Bohart, Knowlton).

WHITE-LINED SPHINX (Celerio lineata) - CALIFORNIA - Heavy, larval populations migrated across roadways in Pauma Valley, San Diego County. (Cal. Coop. Rpt.). UTAH - Adults flying at Logan, Cache County, and Salt Lake City, Salt Lake County; occasionally numerous. Numerous at blossoms in northern part of State. (Knowlton).

BANDED WOOLYBEAR (Isia isabella) - IDAHO - Late instars general throughout Grangeville area, Idaho County. (Studer).

A SKIPPER (Erynnis juvenalis) - PENNSYLVANIA - Unspecified stage numerous along roadsides in Franklin County. (Balsbaugh).

A NOCTUID MOTH (Orthosia hibisci) - PENNSYLVANIA - Adults very numerous around lights April 24 at Hanesdale, Wayne County, and April 27 in Schuylkill and Snyder Counties. (Jeffery, Cook).

CHEESE SKIPPER (Piophilha casei) - RHODE ISLAND - Concentration of adults in Pascoag, Providence County, near site of nuisance infestation reported in 1961, caused local concern. Adults now present probably from pupae that escaped treatment applied in 1961; breeding material (hides) has been removed. (Mathewson, May 1).

BAMBOO POWDER-POST BEETLE (Dinoderus minutus) - CALIFORNIA - Heavy, adult populations infested bamboo nursery stakes in Torrence, Los Angeles County. (Cal. Coop. Rpt.).

A MARCH FLY (Bibio sp.) - IDAHO - Extremely abundant on flowering plums and mountain-ash in Moscow area, Latah County. (Manis).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - ALABAMA - Gravid, wingless females observed at several nurseries and orchards in Mobile County; largest numbers occur just before and after thundershowers. (Seibels, Buttram).

AN ACARID MITE (Tyrophagus longior) - CALIFORNIA - Occurred in medium infestation on honey agaric (Armillaria mellea). (Cal. Coop. Rpt.).

SEED-CORN MAGGOT (Hylemya cilicrura) - MARYLAND - A fungus disease killed adults in small grain fields in Dorchester and Worcester Counties. (U. Md., Ent. Dept.).

CORRECTIONS

CEIR 12(9):134 - Third paragraph, second line from bottom: (Sogota orizicola) should read (Sogata orizicola).

CEIR 12(16):386 - BROWN SOFT SCALE (Coccus hesperidum) - TEXAS - Re-examination of specimens on dooryard oaks in Jefferson County showed them to be Lecanium sp., not C. hesperidum.

CEIR 12(18):447 - CORRECTIONS - CEIR 12(13):283 - A SCALE INSECT - last line should read, ... Chrysomphalus sp., probably obscurus. (Ark. Ins. Sur.).

CEIR 12(19):467 - PAINTED MAPLE APHID (Drepanaphis acerifolii) - should read (Drepanaphis acerifoliae).

ADDITIONAL NOTES

VERMONT - BIRCH LEAF MINER (Fenusa pusilla) adults becoming active. A WEBWORM on juniper reported from several areas. (MacCollom).

NORTH CAROLINA - Peak adult emergence of ALFALFA WEEVIL (Hypera postica) occurred during first week of May in central Piedmont region. Unusually heavy damage occurred on lower slopes of mountains at elevations of 2,000 feet or lower in Asheville and Hendersonville areas. (Mount). SOUTHERN PINE SAWYER (Monochamus titillator) emerging through sheetrock in a Randolph County home. FLORIDA WAX SCALE (Ceroplastes floridensis) infesting camellias in Wilson County. (Robertson).

IOWA - Adults of CLOVER ROOT CURCULIO (Sitona hispidula) ranged 1-5 per 10 sweeps in every field of alfalfa and red clover examined period May 2-8. PEA APHID (Macrosiphum pisi) populations very spotty; ranged 1-2 stem-mothers per sweep in southeastern and 0-1 per sweep in northeastern area. Stem-mothers giving rise to live young in few fields. Predators now common. First and second instars of

CLOVER LEAF WEEVIL (Hypera punctata) ranged 0-4 per crown in alfalfa and red clover. Feeding very light; mostly in southern half of State. Damage by SWEET-CLOVER WEEVIL (Sitona cylindricollis) reported in Washington, Story and Plymouth Counties. SPRING CANKERWORM (Paleacrita vernata) hatched about April 25 in southwestern area and May 2 in southeastern area; now feeding on elms in southern half of State. Damage sufficient in Mills, Polk and Page Counties to justify controls; 25 percent of elm leaves with holes on May 3 in Mahaska County; 10 percent on May 4 in Linn County showed feeding injury. No evidence of activity in northern part of State. Newly hatched ELM SAWFLY (Cimbex americana) feeding on elm leaves in Poweshiek County May 3. Pupation of SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) began May 7 at Ames; emergence expected May 14-17. (Iowa Ins. Inf.).

SOUTH CAROLINA - Buildup of ALFALFA WEEVIL (Hypera postica) reported in Newberry and Anderson Counties. CLOVER HEAD WEEVIL (H. meles) damaged clover in Abbeville County. First FACE FLY (Musca autumnalis) of season reported at Walhalla, Oconee County, April 23. (Nettles et al.).

NORTH DAKOTA - Survey of GRASSHOPPER egg development conducted in central and western parts of State. In Grant, Hettinger, McKenzie and Dunn Counties, egg development ranged from clear to advanced segmentation; 25 percent of eggs clear; 39 percent coagulated; 21 percent showed eyespot and 20 percent segmented. First instar of MIGRATORY GRASSHOPPER (Melanoplus sanguinipes) observed along roadsides in southeastern McKenzie County and northern Dunn County. First instars of CLEAR-WINGED GRASSHOPPER (Camnula pellucida) noted on rangeland in northwestern Dunn County. All eggs of this species in segmented stage. (Brandvik). In Pierce, Botteneau, Renville, Ward, Burke and Divide Counties, 80 percent of eggs of C. pellucida in segmented stage. Eggs of M. sanguinipes and TWO-STRIPED GRASSHOPPER (M. bivittatus) 30 percent segmented, 40 percent with eyespot, 20 percent coagulated and remainder clear. No grasshoppers emerging. In Williams, Mountrail and McLean Counties, first instars of C. pellucida and M. sanguinipes observed at 1 per square yard on southern exposures of short grass rangeland; eggs of M. bivittatus and M. sanguinipes 30 percent segmented, 40 percent with eyespot, 20 percent coagulated and 10 percent clear. Eggs of C. pellucida 100 percent segmented. Thirty percent of eggs in all counties in northwestern part of State dried and desicated. (Wilson).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. ips.	Feltia subterr.	Perid. saucia	Prod. ornith.	Protoparce sexta	Heliothis quinq. zebra	vires.
ARKANSAS								
Hope 5/3-9		3		1				
Morrilton 5/3-9	3	2						
Kelso 5/3-9	5	5		3				
CALIFORNIA								
Shafter Exp. Sta. 5/3-9	2	17	2	10		5	5	
COLORADO								
Two Buttes 5/4-11		171						
New Liberty 5/4-11		5					3	
FLORIDA								
Gainesville 5/10		1						
Quincy 5/7		2	3			1		
ILLINOIS (County)								
Champaign 5/4-10	264	8						
INDIANA (County)								
Vanderburgh 5/1-9	201	10		2				

(Continued on page 504)

LIGHT TRAP COLLECTIONS (continued)

	Pseud. unip.	Agrot. ips.	Feltia subterr.	Perid. saucia	Prod. ornith.	Protoparce sexta	Heliothis quinq.	zeae	vires.
IOWA									
Ames 4/15-5/8	144	117		23					
Columbus Jct. 4/15-5/1	339	173		16					
Soldier 4/17-5/6	40	62		25					
Dubuque 4/21-5/3	43	7		1					
Hastings 4/19-5/2	26	7		4					
Milford 4/26-30, 5/5-7	16	3							
KANSAS									
Garden City 5/17	102	4		28					
Hays 5/4,8	121			4	1				
Manhattan 5/4-10	86	19		5	2				
Mound Valley 4/30-5/1,5,8	60	12		20	1				
Wathena 4/30-5/6	72	8		6	2				
MISSISSIPPI									
*Stoneville 5/4-10	52	56	12	14	35	3	1	7	
NEBRASKA									
North Platte 4/25-5/2	10	10		27					
SOUTH CAROLINA									
Charleston 4/30-5/6	3	10	16		10			2	2
Clemson 5/5-11	20	6		5	1			4	
SOUTH DAKOTA (County)									
Brookings 5/10-11	12								
TENNESSEE (Counties)									
Madison 4/24-30	14	2		2					
Maury 4/24-5/7	59	11		1					
Robertson 4/24-5/7	46	11		3	2				
Cumberland 4/24-5/7	92	28		2				1	
Greene 4/24-5/7	74	11		5	2				
Blount 4/24-30	620	24		4					
Johnson 4/24-5/7	70	10		2	1				
TEXAS									
Brownsville 4/28-5/3	5	13	234	9	10	2	9	64	
Waco 5/5-11	12	10	29	28	88			30	
WISCONSIN									
Platteville 4/30-5/3	53	1							
Middleton 5/4-9	8	1							
Madison 5/4-9	8	1							

Additional Light Trap Collections

CALIFORNIA (Shafter Exp. Sta., 5/5-9) - Loxostege sticticalis - 16; Prodenia praefica - 166; Proxenus mindara - 25; Spodoptera exigua - 29

COLORADO (Two Buttes, 5/4-11) - L. sticticalis - 389.

KANSAS - L. sticticalis - (Garden City, 5/1-7) - 188; (Hays, 5/4,8) - 56; (Manhattan, 5/4,10) - 2. Ostrinia nubilalis (Manhattan, 5/4,10) - 1.

* Two traps - Stoneville

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

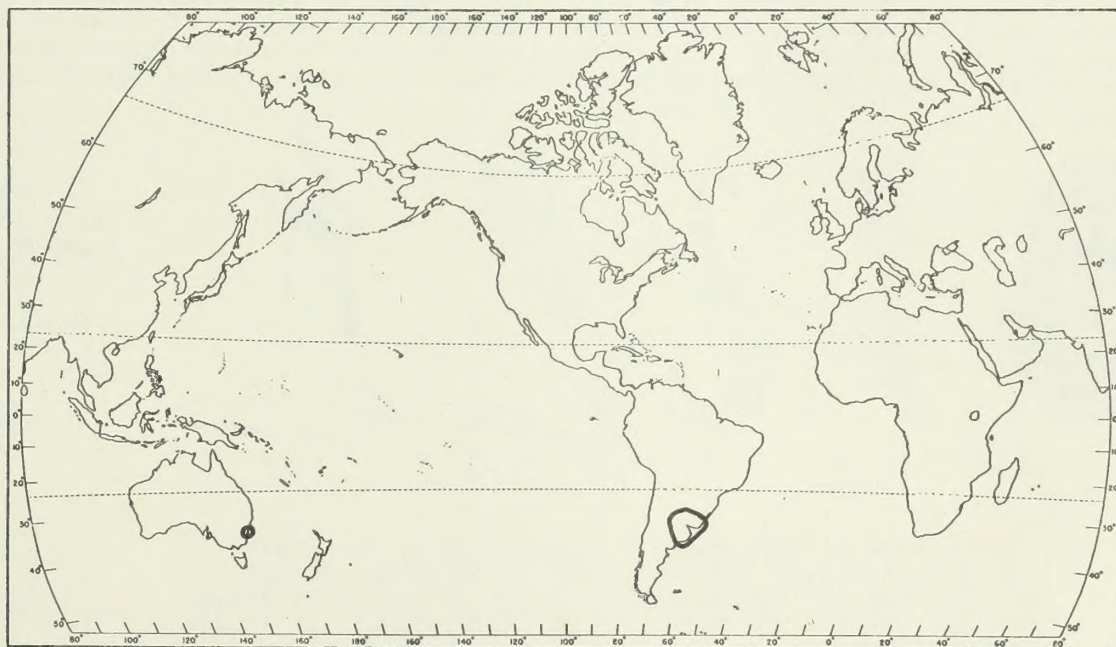
A Pasture Scarab (Cyclocephala signaticollis Burmeister)

Economic Importance: This scarab, which was described by H. C. C. Burmeister in 1847, is a native of Argentina and Uruguay. It is known to attack the roots of native grasses and several cultivated and pasture crops in those countries. At some time prior to 1947, the species was introduced into Australia. The species was known to occur in a number of Sydney suburbs by 1955. Although the pest caused only minor damage by 1955, Australian officials were concerned that the species might spread into other areas more favorable to its survival. C. signaticollis is closely related to a number of serious pests in South America and the United States, which occasionally cause severe damage to improved pastures, lawns or vegetable crops. The northern masked chafer (Cyclocephala borealis Arrow) and southern masked chafer (C. immaculata (Olivier)) are probably the two most commonly encountered and widespread species in the United States.

The distribution of C. signaticollis in South America and Australia is quite similar in that the species is recorded in similar latitudes. Sydney is 33° 52' S. and Buenos Aires is 34° 36' S. In the United States, these latitudes would be comparable to Charleston, South Carolina, on the east coast, and San Diego, California, on the west coast.

Hosts: Recorded in lawns and pastures in Australia and observed attacking native grasses, alfalfa, wheat, corn, flax, sunflower and barley in Argentina.

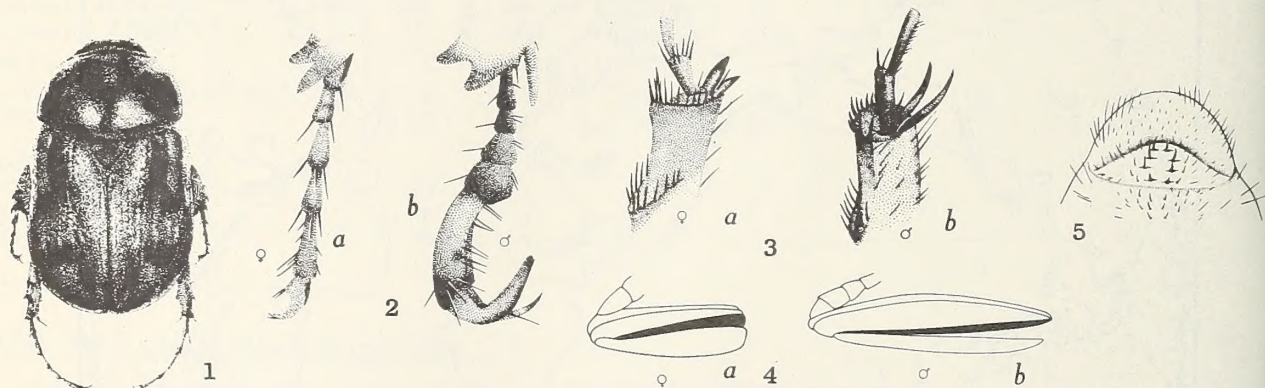
Distribution: Recorded in Argentina (Buenos Aires, eastern Cordoba, southern Santa Fe, Entre Rios Provinces, and the northeast of the La Pampa Territory), Uruguay and Australia (Sydney area of New South Wales).



General Distribution of Cyclocephala signaticollis Burmeister

Life History and Habits: As far as known, nothing has been published regarding the biology of *C. signaticollis* except for the field observations made in Australia. In the Sydney area, larval feeding and damage to vegetation are confined to the autumn and early winter months, there being no resumption of activity in the spring. Larval development is very rapid and most of the larvae complete their feeding by late fall. The adult flight period is from late November to early January, with peak flights occurring in late December. The adults first appear in flight at dusk, becoming strongly attracted to lights after dark; males outnumber females. Copulation occurs on the ground and the females burrow into the soil immediately. The larvae seem to prefer high soil moisture requirements, because the greatest numbers can be found in shaded or otherwise naturally damp situations at the end of May. The average annual rainfall in Sydney (48 inches) is appreciably greater than Buenos Aires (37 inches), but the temperature regime of Sydney is very similar to that of Buenos Aires.

Description: ADULT - Length 1.34 to 1.50 cm. Dorsally glabrous; color light brown to brownish-beige, with the pronotum somewhat darker than the elytra. Elytra and pronotum with complex, bilaterally symmetrical, dark brown markings and shallow irregular punctation; elytral markings obsolete in some specimens, but always present on pronotum. Head dark brownish-black; clypeus dull reddish-brown. Abdomen, legs and coxae light brown, the latter with erect golden hairs. Pygidium lightly and irregularly punctate, glabrous except for central tuft of yellowish hairs on posterior margin. Anterior claws of female equal and simple, and tarsal segments equal in length. Anterior claws much larger in male, strongly asymmetrical, the larger claw with a fine subapical spine externally; last tarsal segment greatly enlarged to support claws and preceding segments correspondingly shorter and broader. LARVA (third instar) - Head capsule yellowish-brown and slightly rugulose; width 4.4 to 5.2 mm.; weakly pigmented ocellus present at base of each antenna. All tarsal claws long and slender. Two posterior pairs of abdominal spiracles larger than first 6 pairs, being approximately equal in size to those of prothorax. Raster and lower anal lip bear numerous small hamate setae; in addition, on the lower anal lip there are some 7 to 9 exceptionally large and deeply pigmented hamate setae, with their sockets arranged in a roughly circular or oval pattern; anal slit transverse. (Prepared in Survey and Detection Operations in cooperation with other ARS agencies and U. S. National Museum). CEIR 12(20):5-18-62.



Figures of *Cyclocephala signaticollis* Burmeister:
1. Adult Male, Dorsal View. 2. Anterior Tarsus;
(a) Female, (b) Male. 3. Spurs of Posterior Tibia;
(a) Female, (b) Male. 4. Antennal Club; (a) Female,
(b) Male. 5. Raster of Third Stage Larva.



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